

Project Development Process for Preconstruction

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2010 Project Development Process for Preconstruction

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Problem Statement:

The South Carolina Department of Transportation (SCDOT) is a cabinet agency governed by a Commission. The Commission is comprised of seven members, six of whom are elected by the legislative delegation of each of the congressional districts. One at-large member is appointed by the Governor. The Commission serves as a general policy making body for SCDOT. The Secretary of Transportation is appointed by the Governor as the chief administrative officer who carries out the policies of the Commission. SCDOT is divided into the divisions of Engineering, Mass Transit, and Finance and Administration. The Engineering division has 6 main departments, one of which is Preconstruction.

Preconstruction develops plans for transportation improvements. Projects include safety improvements, capacity improvements (adding lanes), operation improvements (adding turn lanes and traffic signals) and bridge replacement projects. Once the need for an engineering project is identified and meets certain requirements, the project is added to SCDOT's Statewide Transportation Improvement Program (STIP). Once a project is added to the STIP, fiscal year funding is appropriated to begin the project. Funding for road and bridge projects is based on revenue from State and Federal motor fuel user fees (gas tax). Preconstruction manages the project from its inclusion in the STIP to construction by surveying, developing plans, acquiring right of way, coordinating relocation of utilities, and then accepting bids by contractors.

Road and bridge projects, large and small, are planned, designed, and constructed to connect towns and cities, and impact numerous environments. These environments include human and natural elements. The human environment includes communities,

individual land owners, privately owned utility infrastructure, and publicly owned infrastructure, like libraries, and schools. The natural environment includes lakes, rivers, and streams, wetlands, endangered plants and animals, municipal, state, and national parks. Due to the number of potential environmental impacts on a large road project, like widening an interstate or main thoroughfare, it could take years to secure the required approvals. Required approvals may include purchasing right of way from individual property owners, relocating utility systems to minimize conflicts with proposed improvements, and permits to impact wetlands. Due to the time necessary to construct transportation improvements, Preconstruction needs to work efficiently to minimize delays during project development. A streamlined process is vital in meeting SCDOT's goals of providing adequate, safe, and efficient transportation services for the movement of people and goods.

In 2007, Preconstruction was reorganized from a department based structure to a regionalized structure. The Departments of Program Management, Road Design, Hydrology Design, and Bridge Design were divided into 4 Regional Production Groups (RPGs) responsible for preparing plans for all projects. Also, a support group was formed to ensure that plans are consistent with Department policies and procedures. The main objective of the reorganization was to create a self contained unit whose sole function was producing plans for construction within that region. The goal of the reorganization was to increase efficiency, productivity and customer service by streamlining the plan development process.

Prior to 2007, each department developed projects based on their role in the Plan Development Process. Each department (Hydrology Design, Bridge Design, Road

Design, etc.) developed processes and flow charts detailing these responsibilities and how they connect with other department tasks. Due to the reorganization, the flow of these responsibilities from one area to another has changed.

The goal of this project is to evaluate the Project Development Process for possible inefficiencies and improvements that will help support Preconstruction's goal for reorganization. If the Project Development Process can be refined, it can be used to develop more accurate schedules for developing projects. Accurate schedules are necessary to deliver projects on time and under budget. Since SCDOT's business plan includes objectives and goals to improve safety and reduce congestion, the sooner Preconstruction can deliver these projects for construction, SCDOT can relieve congestion; provide safety improvements and ultimately better serve the traveling public.

Data Collection:

The collection of data is extremely important when trying to determine if a process can be improved. Collecting accurate information from all sources helps determine what steps may be missing, what steps currently are not being completed, and other recommendations that may help the process.

My goal in collecting data was to get feedback from all areas involved in the Plan Development Process. The main method I used to collect data was distributing the existing Project Development Process document (Appendix A) to various departments involved in the development of a project. The document included 32 major tasks describing the Project Development Process. The document was distributed and reviewed by approximately fifteen different offices that, at some time, have a role in the

development of a project. The offices included Project Management (4 project managers), RPG Design Managers (3), RPG Engineers (4), Structural Engineering (2), Roadway Design (4), Hydrology Design (2), Program Controls (1), Finance (1), Right of Way Acquisition and Utility Engineering (4), Traffic Engineering (5), Construction office (5), Surveys office (1), Environmental office (3), and Planning office (1). Department staff shared their comments (Appendix B) based on the new Regional Production Group Structure, which were incorporated into a revised document (Appendix C). Based on this type of interview technique, I was able to obtain numerous comments in a relatively short time frame. As a user of the project development process, I also reviewed the document and made recommendations based on the new structure.

I also collected schedule and resource information from SCDOT's scheduling software, Primavera. Primavera is a project management tool for planning, managing, and executing projects. It is used to identify resources (man-power) needed to design and keep track of the progress of the projects. Project managers are able to input tasks and associated man-hours (duration) necessary to complete the task into Primavera for every project. The durations for each task then are used by Primavera to create a schedule. Tasks are then updated monthly (or when completed) and the schedules revised accordingly. The schedules identify what tasks are on the critical path for project completion. The schedules are then used to track the project and forecast when money will be needed for purchasing right of way or construction (obligations).

Data collected from Primavera included baseline schedules that are used as templates for project managers to begin scheduling a project. The baseline schedule analyzed for this study was a road widening project from two lanes to four lanes with a

continuous left turn lane in the middle (Appendix D.1). This type of construction project is a common type of design SCDOT completes annually.

Data Analysis:

After review of the comments received on the original project development process, I was able to separate them into four categories. One category was for comments and revisions necessary due to the reorganization of preconstruction. The second category was for revisions due to policy changes since 2007. Another category was for duplicate tasks that could be deleted if covered in other parts of the document. And the fourth category, miscellaneous, was for all other comments. I then summed the revisions recommended and plotted the number of comments for each task (Appendix E). Most items identified for changing were due to the reorganization or reasons categorized as miscellaneous. I received approximately 106 relevant comments. Approximately fifty-one percent (51%) were categorized as miscellaneous; approximately twenty eight percent (28%) were due to the reorganization; sixteen percent (16%) were based on policy changes; and five percent (5%) were based on duplicated tasks written in the process.

After plotting the results, only a quarter of the comments were generated due to the reorganization of Preconstruction into RPGs. More than half of the recommendations were necessary based on steps that should be or currently are performed when developing projects. I expected more comments due to the reorganization but the data shows how fluid the process is.

From review of the comments due to reorganizing Preconstruction, task 2 establishes a multidisciplinary team and had six recommended revisions. The team meets with the program manager to discuss the new project and gather available information in order to begin design. Another area with substantial revisions (5) due to reorganization was Design Review Meeting Conducted, Project Design Finalized (task 9). These tasks recommend meetings to discuss the project. In the original process, the team consisted of up to twelve different offices, four of which are now included in each RPG (Appendix F.2). Combining Roadway Design, Hydrology Design, Structural design, and Geotechnical Design under a design manager created one point of contact for these units (Appendix F.3). The revised process streamlines the number of different levels of staff that may be needed for a project, which is one of the goals of the reorganization. The reorganization of preconstruction created a regionalized based structure RPG (Appendix F.4), so a design manager is the lead design engineer with Roadway, Hydrology, and Structural design support following. If the design manager could attend the multidisciplinary team initial project review (scoping meetings) (task 2), for instance, and relay the scope of work identified by the Program Manager, then more time could be spent by staff engineers designing projects, instead of spending time in meetings.

Recommended revisions were also based on policy changes based on internal memoranda, directives, and instructional bulletins and design documents recently released that have not been incorporated into the process. Since 2007, the structural design and geotechnical design units at SCDOT have published design manuals. The 2008 Seismic Design Manual and 2008 Geotechnical Design Manual contain new requirements for the design of roads and bridges owned by SCDOT. Based on these

requirements, geotechnical testing, for example, is now recommended or required more often and therefore could be an item on the critical path for completing a project. The testing requirements now need to be discussed early in the scoping of the project to ensure the tasks are included in the schedule. If the tasks are not included, it may cause delay further into the project due to lack of geotechnical information to correctly design the project. It may take up to a year to get the necessary reports needed for design; therefore, the earlier this process starts, the sooner the design can be finalized.

Memoranda and instructional bulletins are released by the Support Engineer to set policy on how plans are developed. An instructional bulletin (IB) may provide guidance on how new hydraulic pipe is to be designed based on funding source, for example. Another example of an instructional bulletin recommends when design staff should hold a review meeting with construction engineers to ensure the design can be constructed as planned and to determine if any special items need to be included in the plans. A Preconstruction Advisory Memorandum (PAM) is released by the Director of Preconstruction to set policy or procedures for preconstruction staff. An example of a PAM would be the quality control (QC)/ quality assurance (QA) procedure for plan reviews. An Engineering Directive Memorandum (EDM) is released by the Deputy Director for Engineering and sets policy for design, construction, and maintenance staff. An example of an EDM is SCDOT's policy to consider providing bicycle accommodations on projects constructed by SCDOT. Another EDM sets policy on advising the public on road closures/openings due to inclement weather.

New procedures have been implemented according to numerous IBs, PAMs, and EDMs released but not incorporated into the document. It was noted that two IBs, 2006-

6 and 2006-7, recommended field reviews be conducted earlier in the design phase. The reviews were mentioned in the original document, but due to the format, it was not clear when they should be conducted. Instructional bulletin 2006-7, for example, recommended a "Line and Grade" field review be completed early in the design phase. A "Line and Grade" field review is a review conducted specifically to approve the horizontal (Line) and vertical (Grade) alignment of the proposed improvement. Once the horizontal and vertical alignment is approved, then Hydrology Design can begin. If the line and grade is not specifically reviewed and drainage design begins, any change in alignment would affect the drainage design, and additional man-power is needed to review the drainage system as designed. If the alignments could be approved early, then the need for redesigning the hydrology would be minimized. From looking at the flow chart of the original process (Appendix G), it is in the correct location graphically, but in the text format of the document (task 17) a project manager could misunderstand when to have the Line and Grade field review.

In addition to comments regarding policy changes, other changes were noted because of duplicate steps. From review of tasks 5, 7, 13, and 30, there were four instances of tasks that were very similar to tasks completed earlier in the process. In task 5.2, a Project Development Team was created. This type of team is very similar to the Multidisciplinary Team created in task 2. Possibly consolidating this task will save the time it would take to update a new group of team members with the details already discussed by the Multidisciplinary Team created in task 2. In task 7, the process included a step to develop a detailed project schedule. A project schedule is created by the project

Multidisciplinary Team as part of the programming phase of the project. The schedule is updated monthly in Primavera, so revising the schedule is not necessary.

When a project occurs within a municipal boundary, an agreement is required by SCDOT prior to beginning right of way acquisition. The agreement validates support of the project by the municipality. Securing this agreement is mentioned in task 13 and 23. This agreement is necessary prior to obligating right of way funds. Since it is a milestone on the critical path in the project schedule, the program manager is responsible for securing this agreement and is aware of its status monthly when the project schedule is reviewed.

Numerous comments received did not relate to the other three reasons for revisions and were categorized as miscellaneous. These comments related to functions engineers need to understand to design a project correctly. For example, drainage of roads and bridges is a critical component of the design. Roadway drainage dictates the amount of right of way necessary to construct and maintain the road. When assessing the project's impacts on the environment, it is important to understand how much right of way will be required for these drainage systems (ditches) and where they are needed to move the water away from the travel lanes. The earlier the roadway drainage design begins, the quicker environmental engineers can account for the environmental impacts of the project.

A comment received from environmental engineers was to delineate wetland boundaries sooner in the design process. Currently, it is SCDOT's practice to set the horizontal and vertical alignment and then review in the field what type of impacts the alignment may have on wetlands. If wetlands were delineated before the surveys took

place, then the limits could be surveyed and put into drafting software (CADD) prior to setting the horizontal alignment for the project. Showing the wetland boundaries in CADD could help engineers minimize impacts to wetlands located in the corridor. However, delineating wetlands on every project throughout the state prior to surveying would strain the available resources in the environmental department, and based on discussions with the Director of Surveys, it was a practice that was discontinued due to the lack of manpower trained in delineating wetlands.

In the original process, task 8 initiated coordination with railroad and utility companies. As a project manager, I found coordination with utility companies and the railroad company was always on the critical path to letting a project. In order to obligate construction funds for a project, SCDOT must certify that utility agreements are secured. The agreements explain who will pay for utility relocations, whether the costs to move a utility system is the responsibility of SCDOT or the utility company. If the utility company has prior rights, the cost to relocate is paid by SCDOT. If SCDOT has prior rights, the utility owner will pay to relocate. The same is true for railroad involvement. If SCDOT encroaches on the railroad's right of way, an agreement is necessary for the safety of both parties. Another miscellaneous comment received from both project managers and the utility office was that lines of communication with the railroad and utility owners should be open earlier in the project's schedule. The reorganization of preconstruction moved both the Railroad Coordination office and Utility Engineering office under the Director of Right of Way. The railroad projects office has the ability to open the lines of communication with the railroad company early in the process, even when plans are not available. At this stage of project development, designers for both the

railroad and SCDOT can provide information regarding requirements and future plans in the corridor. The Primavera schedule currently links the start of railroad coordination (UTRR010) to submitting right of way plans (75% complete plans) (RDRW110) to the railroad company (Appendix D.2). Currently, the duration of railroad coordination in the Primavera template is 400 man-days (Appendix D.2). If railroad coordination is initiated once funding for engineering is obligated, time could be saved since the railroad could provide input on their future plans earlier in the design phase. Railroad companies still require approval of final plans but if changes in design are minimized late in the design phase, then the time needed to complete the project could be reduced.

The same type of coordination could also be done with utility companies. There are many utility companies throughout South Carolina that are locally owned and operated. They are typically funded by the cost of the utility service (water and sewer fees). When the utility is constructed on SCDOT right of way under an encroachment permit, they are at the mercy of SCDOT. The permit includes a clause that if the SCDOT widens the road, the cost to relocate will be the responsibility of the permitted (utility owner). This is called prior rights. The SCDOT has prior rights since they were there first. Constructing utilities in existing SCDOT right of way is beneficial to the utility owner since they do not have to purchase easements or additional right of way for their own use, and potentially pay property taxes on that land. When SCDOT plans to widen a road, early coordination with utility companies helps them understand impacts that may occur to their infrastructure due to the project. For small utility companies who do not have prior rights, the earlier they assess the impacts the project may have on their systems, the better they can plan for those expenses. In some instances, if the utility

company cannot afford to relocate their systems, they do not execute the agreements with SCDOT to relocate. If the agreements are not executed, SCDOT cannot certify to the Federal Highway Administration (FHWA) that the utility agreements are in place, therefore, jeopardizing SCDOT's ability to obligate the funds for road construction. Typically, utility companies do not spend money to relocate their systems until the construction project is definitely going to occur. In addition, they typically do not execute the agreement acknowledging their responsibility to cover the costs to relocate until the project is definitely going to move forward. Early contact will benefit the companies that may not be able to afford relocating their infrastructure. In order for SCDOT to obligate construction funds, the utility agreements need to be in place.

Recommendations:

As previously discussed I received approximately 106 recommendations for revising the current Project Development Process and all recommendations will be presented to management for review and concurrence. A few of the minor changes recommended include keeping the same Multidisciplinary Team throughout the project to eliminate the time required to bring different staff up to date on the project (Appendix B task 5.2), and delete requirements for creating new schedules throughout the life of the project (Appendix B task 7.2, 10.2, 14.10). In addition to these minor revisions this report analyzes four changes that could be made to streamline the process. The four changes include conducting a "Line and Grade" field review earlier (Appendix C task 8.9), delineate wetlands prior to surveying (Appendix C task 7.3, Appendix D.3,

Appendix G.2), and initiate utility and railroad coordination early in the Project Development Process (Appendix C task 9, Appendix D.4, Appendix G.2).

Implementation Plan:

Fortunately, implementation of the findings discovered during my review appears to be realistic and cost effective. Preconstruction controls the Project Development Process document and Primavera is managed by in-house staff, in the office of Program Controls. These two components function together to produce accurate schedules necessary to complete design projects at SCDOT. The office of Program Controls manages Primavera for both headquarters staff and construction staff in the field. Upper management relies on Primavera for accurate schedule information and to estimate budget needs during the fiscal year. Upper management is in support of anything required to streamline the project development process, which may include revising links between associated tasks in Primavera and reducing durations required to complete tasks. As a design manager, I am responsible for ensuring that plans are developed on schedule and will be able to write the revisions into the document as part of the implementation plan. Program Controls will assist me with man-power necessary to revise the links in Primavera that will change due to the updated process.

The next phase of this project is to review the proposed revisions with the RPG Engineers and the Support Engineer prior to incorporating the comments into the final document. The proposed changes based on comment received and subsequent recommendations are written in Appendix C. Three of the major recommendations are and illustrated in Appendix G.2 (Line and Grade Field Review was already correct in the

flow chart). Approval by the lead engineers in preconstruction is necessary to ensure consistency of plan development. Once management approval is received, the process can be compared to the predecessor information and linked correctly in Primavera. The Primavera templates can then be revised, therefore, when a new project is created, the template used to generate a baseline schedule accounts for the revisions in the preconstruction project development process.

Evaluation Method:

There are many ways to track the time it takes to design a project; unfortunately, due to the number of components necessary for successful project completion, it may be difficult to initially define the exact number of man-hours necessary to complete each task. As discussed previously, there are numerous factors that may arise and impact the schedule for linear type projects. To help this, primavera can be used to evaluate the effects of the process. Primavera is able to filter projects by resources and project type. After the process is revised and the Primavera templates are calibrated, we will be able to filter completed projects by resources and evaluate the durations required to complete certain tasks. The durations necessary to complete tasks can then be measured; if found to be inaccurate, the durations in the templates can be revised.

Summary:

The division of Preconstruction at SCDOT develops plans for road and bridge improvements throughout the state. The process followed to complete projects is called

the Preconstruction Project Development Process. The process is used by project managers, design staff, environmental staff and others throughout SCDOT. In addition to the process, Primavera software is used to track the progress of the project from preliminary engineering to letting of the project and even into construction. The combination of a written process to cover details that cannot be captured with tasks alone and a software component to keep track of projects and milestones is essential to managing and executing projects efficiently. My goal for this project was to review and evaluate the Project Development Process to ensure its accuracy and determine if changes could be made to make it more efficient. From review of all data compiled it appears there are numerous changes that can be made to enhance the Preconstruction Project Development Process. It was interesting to learn that only a quarter of the changes were due to the reorganization. It is also interesting to point out how fluid the Project Development Process is since more than half of the comments were due to reasons categorized as miscellaneous.

The comments and revisions recommended by users of the process will enable staff to efficiently manage and complete projects on time. In order to maintain the Process's effectiveness it will be important to conduct regular reviews of the Process due to policy changes and the memoranda issued annually. Reducing the time required to develop projects will enable the Department to quickly construct projects, providing adequate, safe, and efficient transportation services for the movement of people and goods.

APPENDIX A

“Original” Project Development Process

PROJECT DEVELOPMENT PROCESS

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September 18, 2009

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Project Development Process

Showing Sub-Tasks & Responsible Party Including major milestones with an associated approximate percent complete of the project development process

Note: The Program Manager is the project leader and will lead the Project Development Team (PDT) throughout this process in order to move the project to completion. Changes should be conveyed to the Project Development Team as soon as possible. Bridge projects should involve Structural Design staff on the Project Development Team. The Bridge Construction Office should be used as a resource by the Project Development Team on bridge projects as necessary. The project scoping and cost estimating tasks shown below should typically occur prior to including a project in the STIP. Candidate projects (or groups of projects) would normally be identified through coordination with the Planning Office and the MPO or COG. Local Public Agency projects developed by the Department may follow an abridged process. The attached chart "Dates for Assembling Information on Construction Obligations" should be followed where applicable.

1. APPR

- Whenever a widening or new location project is selected from a long-range plan for inclusion in the State Transportation Improvement Program, the SCDOT Program Manager should have an APPR for the proposed project prior to requesting authorization of funding for design services from the Federal Highway Administration (FHWA) – Program Manager

2. Multidisciplinary Team Initial Project Review

- Coordinate establishment of Multidisciplinary Scoping Team – Program Manager
[Preliminary Design Staff, Road and Bridge Design Staff, Surveys, Environmental, Utilities, Right of Way, Traffic Engineering, Program Controls, Cost Estimating, District Engineering Offices, FHWA and MPO/COG representatives]

Team Member	Items to Gather for Initial Scope Meeting
Program Manager	Estimated project schedule.
Preliminary Design Office	Gather available plans, aerials, etc.
Traffic Engineering	Gather available traffic and accident information currently on file.
Road/Bridge Design Office	Provide all information currently being held in design groups' files.
Utilities Office	Determine if corridor has major utility distribution/collector lines (Exact location not required at this time).
Geotechnical Design	Gather existing soil information, etc.

[For all Federal aid projects, the FHWA environmental representative needs to be part of the review. At this early stage of development, the FHWA Operations Engineer needs to also be part of the review of all federal aid projects in order to assist in developing the Statewide Transportation Improvement Program (STIP)]

- Gather available Environmental Information – Environmental Office
- Gather available Planning Information – Planning Office
- Schedule and conduct office/field review, allowing a minimum of two weeks advance notice and insuring local participation by MPO/COG representative. Define Termini, Purpose of Project – Program Manager
- Prepare/distribute “minutes” from initial project review – Program Manager
- Landscape Architect included in initial project review if landscaping is an early requirement of the project or likely to be an element of the project – Program Manager
- Collect project information to establish draft project schedule – Program Controls Unit

3. Initial Cost Estimates

- Request cost estimate – Program Manager
- Coordinate the gathering of cost estimates from all affected sections, such as RPG, Right of Way, Utilities, Traffic Engineer, etc.–Value Engineer
- Compile and distribute cost estimate for review & comments – Value Engineer
- Distribute cost estimate to the appropriate funding authority – Program Manager
- Forward information to FHWA on all projects – Program Manager
- With Program Manager, coordinate with MPO/COG, etc., and include project in STIP, as appropriate – Planning Office

4. Program Action Request (PAR) Completed

- Prepare and submit PAR, with proposed schedule and minutes from Scoping Meeting attached [including establishing bridge pins, as appropriate] – Program Manager
- Determine use of outside resources – Set-up funding for Consultant and In-House Services as needed – Program Manager

5. Project Authorization Received – Preliminary Engineering Funding Approved

- Immediately notify Program Manager once charge code is established – Preconstruction Resource Management
- Coordinate the establishment of the Project Development Team. Notify team members of project information – Program Manager
[Note: Offer the opportunity to all offices noted in the 1% phase to be included on team, including the FHWA and the Landscape Architect as needed]

6. Surveys/Digital Mapping/Geotechnical Data Requested

- Coordinate and conduct a comprehensive Project Development Team field review, including a thorough review of the project survey, subsurface utility engineering, and preliminary geotechnical requirements with a representative of the survey crew and utility office – Program Manager
- Identify areas that may need geotechnical data to facilitate design – RPG Geotechnical Design
- Prepare project-specific portion of eminent domain ad and submit along with PIN & charge code to Environmental Office – Program Manager
- Complete preparation of eminent domain ad and submit for advertisement – Environmental Office
- Prepare and submit request for accident summary and reports – Program Manager
- Send press release/notification to Communications and Creative Services and to District Offices of possible road closures due to bridge construction – Program Manager
- Prepare the survey and SUE request, allowing a brief review period for the Project Production Team and then submit the survey and SUE request to the Surveys - RPG Geotechnical Design
- Once survey data check is complete, submit survey information to Road Design and notify the Program Manager (via E-mail) – Surveys Office
- Request preliminary soil borings from Office of Materials and Research in areas needing geotechnical study including areas identified by the Landscape Architect where landscaping is planned – RPG Geotechnical Design
- Submit preliminary geotechnical letter to Project/Program Management – RPG Geotechnical Design
- Coordinate with local public agencies and Landscape Architect, as needed, to determine desired scope project – Program Manager
- Select and contract with SUE Consultant, when requested by Project Development Team and provide SUE data, upon completion, to RPG Roadway Design – Survey/Office
[Note: If follow-up survey requests become necessary, for instance, to extend a side road or ditch survey, the request will be prepared and submitted by RPG Roadway Design]
- Prepare and submit requests for traffic data and analysis to the Director of Traffic Engineering, including pavement loading – RPG Roadway Design
[Note: Receipt of Project Authorization Form 10 will trigger RPG Roadway Design to initiate the above task]
- Prepare and submit requests for pavement design to Pavement Design Engineer – RPG Roadway Design
- Perform intersection analysis on major intersections on request of Program Manager – Traffic Engineering

7. Preliminary Design Plans Developed

- Plot existing topography and determine plan sheet layout – RPG Roadway Design
- Coordinate the development of a detailed project schedule – Program Manager
- Prepare design – RPG Roadway Design
- Distribute to Preconstruction Support for QA review of design criteria, geometric design, pedestrian and bicycle accommodations, landscaping – RPG Roadway Design and/or RPG Structural Design
- Distribute to Traffic Engineering for review and recommendation of Traffic Design Review Section – RPG Roadway Design
- For projects requiring alternative geometric designs, prepare comparative cost estimates – Value Engineer
- Distribute the design for review/comments including a constructability review to all members of the Project Development Team including SCDOT Technical Design; any potential design exceptions will be noted – RPG Roadway Design
- Distribute the design to the Director of Construction Office for preliminary construction review – RPG Roadway Design
- Send a copy of the geometric design to MPO/COG and any other local non-SCDOT team members for review and comments, as appropriate – Program Manager
- Request MPO/COG to have the Municipal Agreement signed, as applicable – Rights of Way Section
- For road projects programmed on the National Highway System (NHS) with an estimated total cost in excess of \$25 million or \$20 million for bridge projects on the NHS, initiate and coordinate value engineering review – Value Engineer

8. Utility and Railroad Coordination

- For Railroad involvement, contact the Rights of Way Office to review the project and determine what needs to be provided in Preliminary Design Plans submittal to the Railroad company – Preliminary Design Engineer
- Conduct Utilities Coordination Meeting, when applicable – Utilities Office

9. Design Review Meeting Conducted, Project Design Finalized

- Analyze written comments received from preliminary design review process – Program Manager with RPG Roadway Design and/or RPG Structural Design
- Schedule/conduct office and, if necessary, field review with the Project Development Team to review comments and team members sign-off on revision/addition to preliminary design then resolve all design issues before finalizing the preliminary design – RPG Roadway Design
[Note: Provide one week minimum advance notice]
- On construction slopes, determine whether to require Fee Simple right of way or Slope Permission- Program Manager
[Note: Obtain input from the Rights of Way staff. See memorandum dated September 12, 2001, from the Director of Preconstruction]
- Identify possible structures to be built or modified including culverts, nonstandard drainage items, sound barrier walls, and retaining walls – Program Manager
- With the assistance of Program Manager and Geotechnical Engineer, create a cost estimate for possible retaining walls – RPG Structural Design and RPG Roadway Design
- Evaluate alternatives to retaining walls, e.g. purchasing additional right of way, changing alignment, etc., to determine most appropriate design – Program Manager
- Establish proposed boring locations & request Right of Way to obtain drilling access permission – RPG Geotechnical Design
- Add proposed boring locations to plans – RPG Roadway Design

10. Design Revised, As Necessary

- Update cost estimates to relate to revised geometric design (Optional, if needed) – Value Engineer
- Review and revise, as necessary, the project schedule – Program Controls Unit
- Complete and distribute copies of the final preliminary design to all members of the Project Development Team including Program Controls – RPG Roadway Design
- Coordinate review of cost estimate and resolve the differences, if necessary – Program Manager
- Place preliminary design onto existing topography and develop preliminary plans –RPG Roadway Design
- With the help of the SCDOT Highway Design Manual and the RPG Structural Design Office, create list of facing options for visible structures to be presented at the Public Hearing – Program Manager

11. Project Planning Report Submitted – Environmental Studies & Document Initiated

- Prepare and submit project planning report to the Environmental Office with a copy circulated through the appropriate offices – Program Manager
[Note: PPR's shall be shared with the RPG Structural Design Office for projects involving a bridge]
- Submit a copy of the project planning report to the State Energy Office and FHWA, as appropriate – Environmental Office
- On all consultant projects involving multilaning or new location construction where the consultant is responsible for preparing the environmental document, complete the project planning report concerning transportation efficiency and forward it to the Environmental Office for transmittal to the State Energy Office – Program Manager
- Review project schedule with Project Development Team and determine appropriate estimated completion date for approved environmental document and public hearing displays – Program Manager
- Prepare environmental document – Environmental Office
- Coordinate design exceptions and interchange modification request – Program Manager
- Provide conceptual landscaping information as related to right of way acquisition, as necessary – Landscape Architect
- Prepare the Interchange Modification Report and all other traffic studies that may be necessary – Traffic Design Engineer

12. Environmental Document Submitted for Approval

- Distribute environmental document to the Program Manager and FHWA for review and comment – Environmental Office
[Note: Program Manager may request input from Project Development Team concerning the environmental document]
- Revise Environmental document, as necessary, and submit document for FHWA's approval
[Also, notify Program Manager via e-mail that document has been submitted] – Environmental Office

13. Environmental Document Approval Received

- Distribute copy of the approved document to the Program Manager - Environmental Office
- Coordinate with Program Manager and prepare the public hearing booklet – Environmental Office
- Determine if visualization techniques are needed. Coordinate with Rights of Way, Environmental, and Program Development – RPG Roadway Design
- Review information with Environmental Office to be placed on public hearing display and contact RPG Roadway Design Office to prepare display – Program Manager
- Complete the preparation of the public hearing displays – RPG Roadway Design
- Arrange appropriate location/date for public hearing – Program Manager
[Note: Program Manager to coordinate with Environmental Office and Communications & Creative Services to insure that all appropriate SCDOT, FHWA, MPO/COG, elected officials and other personnel are notified of the hearing]
- Request public hearing sign panels and coordinate the installation of the public hearing signs with District staff – Program Manager
- Prepare project-specific portion of public hearing advertisement and submit to Environmental Office – Program Manager
- Complete the preparation of the public hearing advertisement and submit appropriately – Environmental Office
- Review public hearing displays with appropriate staff and FHWA, a minimum of three weeks prior to the public hearing – Program Manager
- Review Public Hearing display with the City or Town Leaders, if located within the municipal limits, request execution of Municipal State Highway Project Agreement. Submit executed Agreement to the Rights of Way Office – Program Manager
- Send copies of public hearing plans, environmental document, etc., at least two weeks prior to the public hearing, to the District Office and to the local contact person as identified on the public hearing signs – Program Manager
Submit executed Agreement to the Rights of Way Office – Program Manager
- Send formal notice of the public meeting to all utility companies involved on the project at least two weeks prior to the meeting requesting their attendance – Program Manager

14. Design Public Hearing Completed

- Coordinate/conduct public hearing – Program Manager
[Note: Encouraging MPO/COG staff to actively participate]
- Respond to public hearing comments – Program Manager
- Prepare public hearing certification package and submit to FHWA – Environmental Office
- Revise preliminary design plans, as necessary, and distribute to all Project Development Team members – RPG Roadway Design
- Develop right of way plans with final input from the PPT – RPG Roadway Design
- Request updated cost estimates [route request through the Regional Production] – Program Manager
- Estimate the cost of utility relocation particularly those that have prior rights-Utilities Office
- Estimate cost of any wetland mitigation effort – Environmental Office
- Update cost estimates – Value Engineer
- Review and revise, as necessary, the project schedule – Program Controls Unit
- Distribute updated cost estimate to the Project Development Team including the FHWA - Program Manager
- Coordinate the resolution of any substantial changes in the cost estimate and initiate any necessary STIP adjustment – Program Manager
- When retaining walls have been selected as the most appropriate alternative for the site, Notify RPG Structural Design Office of required facing to be used (selected from the list of options created during preliminary design) – Program Manager

15. Environmental Permit(s) Submitted

- Prepare necessary permit application(s), review with program manager, and submit appropriately – Environmental Office
[Note: Permit applications should include impacts caused by relocation of utilities]
- Coordinate the resolution of any issues raised by permitting agencies – Environ. Office

16. Preliminary Right of Way Plans Completed

- Review and update project schedule with Project Development Team – Program Manager
- Prepare preliminary right of way plans, cross sections, etc., necessary for a Design Field Review (DFR) coordinated with Project Development Team and schedule a DFR – RPG Roadway Design Office
[Note: Program Manager will send plans to MPO and COG team members]
- Provide conceptual signing and traffic signal/ITS information as related to right of way acquisition, as necessary – Traffic Engineering
- Send typical section sheets to Pavement Design Engineer to verify pavement design – RPG Roadway Design
- Contact Utilities Office to review preliminary right of way plans to ensure all needed information is included on plans – RPG Roadway Design
- Identify proposed structures that may require geotechnical investigation and submit to RPG Geotechnical Design – RPG Structural Design with RPG Roadway Design

17. Design Field Review

- Coordinate and conduct a Design Field Review (DFR) providing a thorough field review of the preliminary plans by the Project Development Team, to include the District Utility Coordinator, beginning with an office review followed by an on-site inspection – RPG Roadway Design
- Revise plans in accordance with comments from the DFR and provide revised plans, cross sections, etc., to the Project Development Team – RPG Roadway Design
- Provide revised plans to RPG Hydraulic Design Office to initiate drainage design and then notify Program Manager (via email) that this task has been completed – RPG Roadway Design
- Provide road plans, including plan and profile, cross-sections, pavement designs, and typical sections to Work Zone Traffic Control Coordinator in Traffic Engineering to begin preparation of work zone traffic control staging plans – RPG Roadway Design
- Provide revised plans (1 full & 1 half size) including cross sections to Geotechnical Design – RPG Roadway Design
- Provide proposed structure design criteria to RPG Geotechnical Design – RPG Structural Design or RPG Roadway Design
- Notify Signing & Marking Plans Preparation Engineer in Traffic Engineering upon completion of plan and profile sheets to permit scheduling of signing and pavement marking plans preparation – RPG Roadway Design
- Notify Signal Systems Engineer of new signals and/or signal upgrades – RPG Roadway Design
- Submit Final Interchange Modification Request to FHWA – Program Manager
- Meet with Utility Companies to begin early coordination – District Office
- Review and revise, as necessary, the project schedule – Program Manager

18. Geotechnical Investigations & Reports

- Coordinate with Environmental Design to determine if site is historically significant or if there is soil, surface water, or subsurface water contamination – RPG Geotechnical Design
- Request subsurface investigations for proposed structures – RPG Geotechnical Design
- Provide structure plan and profile to Geotechnical Design – RPG Structural Design or RPG Roadway/Bridge Design
- Provide final geotechnical report including final structure recommendations to RPG Structural Design – RPG Geotechnical Design
- Provide final geotechnical report including all relevant hydraulic parameters to RPG Hydraulic Design – RPG Geotechnical Design

19. Structures Designed

- Establish structure alignment and stationing, provide to RPG Roadway Design Group a sketch showing additional right of way needed due to structure footprint or construction requirements – RPG Structural Design or RPG Roadway Design
- Design structure for construction plans based on information provided in the final geotechnical report – RPG Structural Design or RPG Roadway Design
- Prepare plan, profile, and cross section drawings to be included in the construction plans - RPG Structural Design or RPG Roadway Design

20. FONSI Submitted for Approval

- Review with the Program Manager any project changes that may have occurred since document approval, prepare the FONSI request, and allow Program Manager to review, and then submit to FHWA – Environmental Office
[Note: Program Manager may share the FONSI request with the Project Development Team for comments]

21. FONSI Approval Received

- Provide copy of approved FONSI to Program Manager – Environmental Office
- Coordinate with Environmental Office and prepare project-specific portion of advertisement – Program Manager
[Note: If the project involves a Categorical Exclusion and a public hearing is held, the Program Manager will coordinate with the Environmental Office and insure that the appropriate Study Report and advertisement is prepared and submitted]
- Complete the preparation of the advertisement and submit appropriately – Environmental Office
- Prepare a summary memorandum and notify the Project Development Team of the Highlights of the Environmental Document and commitments SCDOT have made – Environmental Office

22. Preliminary Right of Way Plans Field Review

- Examine the preliminary right of way plans with emphasis on the roadway drainage and the impact of the project to the adjacent properties. This review will also identify how new and existing right of way and roadway designs will impact construction – RPG Roadway Design
- Complete the drainage design and review with the Project Development Team – RPG Hydraulic Design
- Complete and submit work zone traffic control staging plans – Traffic Engineering
- Coordinate with the Construction Office and establish the Constructability Review Team and date of their review – Program Manager
Ref: SCDOT Construction Manual – Section 101.3.1 (Constructability Review)
- Perform constructability review – Constructability Review Team

23. Right of Way Plans Completed & Signed

- Review project schedule with Project Development Team and update as necessary - Program Manager
- Verify execution of Municipal State Highway Project Agreement, if required. If Agreement has not been executed, re-submit for execution by the City or Town. - Rights of Way
- Provide completed right of way plans to the Landscape Architect to receive recommended landscaping – RPG Roadway Design
- Review and prepare Design Exceptions and forward through Program Manager to the Director of Preconstruction for approval – RPG Roadway Design
- Notify Value Engineer[through Regional Production Engineer] to initiate updated cost estimates include updated cost on utility and wetland mitigation – Program Manager
- Review and revise, as necessary, the project schedule – Program Controls Unit
- Prepare updated cost estimates, utilizing input from R/W, Utilities, Traffic Engineering, Environmental, etc., as appropriate – Value Engineer
- Include right of way requirements around new or modified structures as provided by RPG Structural Design Office – RPG Roadway Design
- Coordinate the resolution of any substantial changes in estimated costs and share the information appropriately – Program Manager
- Complete Quality Control review of right of way plans. Obtain necessary initials and submit to Roadway Design Support for quality assurance review. – RPG Roadway Design
- Complete QA Review of right-of-way plans and return comments to RPG Engineer – Roadway Design Support
- Complete the right of way plans, including resolution of review comments and routing for final signatures. Submit the plans to Rights of Way Office and FHWA, as requested; notifying the Program Manager – RPG Roadway Design
- Provide completed right of way plans to the Rights of Way Office to initiate utility coordination and also railroad coordination, if railroad involvement – RPG Roadway Design
- Send right of way plans to the District Office to initiate District utility coordination - Utilities Office
- Begin coordination necessary to secure Utility Agreements and No-cost relocation sketches – District Office
- Send right of way plans to the railroad with detailed letter explaining the project as it effects the Railroad to initiate their review – Utilities Office

24. Right of Way Funding Obligated & Acquisition Process Initiated

- Submit right of way cost estimate to Preconstruction Resource Management– Rights of Way Section
- Coordinate the obligation of right of way funds and notify the Program Manager and Director of R/W immediately upon approval of funds – Preconstruction Management
- Initiate R/W acquisition process – Right of Way Section

25. Project Assessment

[Note: Project Development Team meets to ensure project commitments are being met. FHWA, MPO/COG representatives, and utility companies discuss with Project Development Team any project specific requirements that need to be included in the contract documents – Program Manager

- All project requirements as a result of field reviews, design exceptions, constructability reviews, and maintenance of traffic concerns are addressed – Program Manager
- Right of way special provisions, as a result of negotiations, provided to RPG Roadway Design and to Letting Preparation to be reflected in the plans or contract special provisions – Rights of Way Office
- All relocations will be completed prior to award, or the appropriate special provisions are provide to Road Design to be included in the contract special provisions as concurred by the FHWA – Right of Way Section
- Utility relocations, special requirements, funding, and other items as needed are in place and included in the contract as appropriate – Program Manager
- Local municipality needs are identified and included in the special provisions where appropriate. This could vary from lane closure restrictions for special events, to landscaping coordination, to coordination of preferred detour routing and signing – Program Manager
- Environmental commitments and constraints are provided to RPG Roadway Design in order to be clearly indicated in the proposal and/or plans – Environmental Office
- Contract durations are appropriate for the size and complexity of the project – Letting Preparation
- Cash flow requirements are discussed with the Finance Office and the overall status of the Program area will allow the project to proceed to completion – Program Manager
- Other items as dictated by the individual project – Program Manager

26. Construction Plans Review

- Provide construction plans to the construction field office for review by the Resident Engineer – RPG Design Manager
- Examine the construction plans for completeness with emphasis on the estimated quantities. District may add or revise quantities as deemed necessary to construct the project. Make changes to quantities on the summary of estimated quantities sheet sent by RPG Design Manager. A field review may be held but is not required - District/Resident Engineer

27. Construction Plans Completed & Signed

- Request right of way revisions to plans subject to approval by Program Manager – Rights of Way Office
- Finalize box culverts, retaining wall and shoring designs; provide details for plans – RPG Structural Design
- Provide pavement marking, signing, traffic signal/ITS plans and update staging plans as necessary to RPG Roadway Design –Traffic Engineering
- Provide to RPG Roadway Design any required special provisions or estimates – Landscape Architect
- Determine need for a Pavement Design Review. Resubmit forms for traffic information and pavement design, as needed – RPG Roadway Design
- Complete road construction plans – RPG Roadway Design
- Complete bridge construction plans, complete special provisions and estimates – Letting Preparation – RPG Structural Design
- Complete Quality Control review of Construction Plans. Obtain necessary initials and submit to Roadway Design Support and/or Structural Design Support for quality assurance review. – RPG Roadway Design
- Complete QA Review of Construction Plans and return comments to RPG Engineer – Roadway Design Support
- Complete the Construction Plans, including resolution of review comments and routing for necessary signatures – RPG Roadway Design
- Include structure plan, profile, and cross section sheets as provided by Structural Design – RPG Roadway Design

28. Finalize Utility Coordination/Relocation

- All Utility Agreements and No-cost relocation sketches received from the District are Review, approved, and utilities are authorized to begin work – Utilities Office
- Contract Documents Office begins writing and researching special provisions and/or supplemental specifications as indicated by Design Group – Letting Preparation

29. Contract Proposal Preparation

- Complete engineers' estimate in PES for use by Program Manager, Contracts Administration and Preconstruction Resource Management – Letting Preparation
- Complete cost estimate updates including review of PE and R/W expenditures and remaining budgets – Value Engineer
- Complete special provisions and prepare proposal for printing – Letting Preparation
- Coordinate the resolution of any substantial changes in the estimated costs and share the information appropriately – Program Manager
- On large projects, prepare a CPM schedule to establish reasonable construction schedule - Construction Office
- Conclude participation agreement with governmental entities concerning maintenance of landscaping – Program Manager

30. PS&E Submittal and Environmental Permit(s) Approved

- Upon receipt of approved permits, notify Program Manager and then distribute copies appropriately – Environmental Office
[Notify FHWA of permit approval dates or problems encountered]
- Right of Way acquisition process completed, with all tracts either acquired or condemned – Rights of Way Office
[FHWA needs Right of Way certificate on all Interstate projects and projects greater than \$50 million on the National Highway System] and other projects by request of FHWA (See FHWA Oversight Agreement)
- Submit PS&E package to FHWA, as appropriate – Preconstruction Management
- Receive and distribute FHWA Project Authorization Approval – Preconst. Resource Mgmt.
- Distribute Utility Agreements and/or relocation sketches – Utilities Office
- Prepare and publish ad for highway letting for project – Contracts Administration
- Conduct Pre-Bid Meetings on large and multi-phased projects, address utility conflict issues and if necessary prepare addenda to disseminate the minutes and Q&A from the Pre-Bid meeting – Director of Construction Office

31. Construction Bids Received

- As soon as possible after bid opening, submit bid information to appropriate Program Manager – Contracts Administration
- Coordinate the resolution of any substantial differences between bid and STIP amounts – Program Manager
- Coordinate contract award with the FHWA on all oversight projects, provide necessary bid information – Contracts Administration
- As soon after bid opening as possible, load bid information into TrnsPort Program in order to analyze the bid and to expand the bid history – Contracts Administration

32. Award Project – Monitor Project Expenditures & Report Periodically to MPO, COG

- Notify Program Manager upon approval of award – Contracts Administration
- Schedule/conduct preconstruction conference – Resident Construction Engineer
- Provide information periodically to Program Manager on status of construction and construction expenditures, upon request – Construction Office
- Provide information periodically to Program Manager on status of condemnation cases, R/W hold offs, and remaining anticipated R/W expenditures, upon request – Rights of Way Office
- Distribute Railroad Agreements to the appropriate railroad company – Rights of Way Office

1st Revision January 13, 1999

2nd Revision February 3, 1999

3rd Revision April 11, 2000: Included information concerning design exceptions to page 3

4th Revision August 6, 2001

5th Revision August 31, 2001

6th Revision November 30, 2001

7th Revision April 15, 2002

8th Revision June 24, 2002

9th Revision January 17, 2003

10th Revision February 12, 2003

11th Revision April 22, 2003

12th Revision January 25, 2005 – Revisions highlighted

13th Revision March 15, 2005 – Revisions highlighted

14th Revision May 9, 2005 – Revisions highlighted

15th Revision July 6, 2005 – Revisions highlighted

16th Revision February 1, 2006 – Revisions highlighted

17th Revision June 26, 2006 – Revisions highlighted

18th Revision July 18, 2006 - Revisions highlighted

19th Revision August 13, 2009 – Revisions highlighted

20th Revision September 18, 2009 – Revised to indicate new organizational structure. Reworked first few activities.

Original Process

APPENDIX B

Comments Received on Original Project Development Process

PRECONSTRUCTION PROJECT DEVELOPMENT PROCESS

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September 18, 2009

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DRAFT

Preconstruction Project Development Process

Showing Sub-Tasks & Responsible Party ~~Including major milestones with an associated approximate percent complete of the project development process~~

Note: The Program Manager is the project leader and will lead the Project Development Team (PDT) throughout this process in order to move the project to completion. Changes should be conveyed to the Project Development Team as soon as possible. The process below assumes the project has a defined purpose and need and is approved by the Commission and is included in the State Transportation Improvement Plan (STIP). Candidate projects (or groups of projects) would normally be identified in accordance with Legislative Act 114 through coordination with the Planning Office and the Metropolitan Planning Organization (MPO) or Council of Government (COG). Local Public Agency projects developed by the Department may follow an abridged process.

~~Bridge projects should involve Structural Design staff on the Project Development Team. The Bridge Construction Office should be used as a resource by the Project Development Team on bridge projects as necessary. The project scoping and cost estimating tasks shown below should typically occur prior to including a project in the STIP. Candidate projects (or groups of projects) would normally be identified through coordination with the Planning Office and the MPO or COG. Local Public Agency projects developed by the Department may follow an abridged process. The attached chart "Dates for Assembling Information on Construction Obligations" should be followed where applicable.~~

1. Advanced Project Planning Report (APPR) and Corridor Feasibility Studies (CFS)

- The Office of Planning works with MPOs and COGs to identify eligible projects and facilitates their inclusion in their Transportation Improvement Plans (TIP) and the STIP. Whenever a major widening or new location project is selected from a long-range plan for inclusion in the State Transportation Improvement Program, the Planning Office develops an Advanced Project Planning Report (APPR) or Corridor Feasibility Study (CFS). An APPR and CFS is a document that identifies impacts to the surrounding environment and communities. The SCDOT Program Manager should have an approved (by MPO or Local Representative) APPR developed by Planning Office for the proposed project prior to scoping the project and requesting authorization of funding for design services from the Federal Highway Administration (FHWA).—Program Manager

2. Multidisciplinary Team Initial Project Review/Initial Project Development Team Meeting (Scoping Meeting)

The purpose of this meeting is to explain the purpose and need of the project for the Project Development Team – Program Manager

- Coordinate establishment of Multidisciplinary~~the~~ Scoping Project Development Team (PDT) – Program Manager
 [RPG Preliminary Design Staff, Support Road and Bridge Design Staff, Surveys, Environmental, Utilities, Right of Way, Railroad Projects Office, Traffic Engineering, Program Controls, Cost Estimating, District Engineering Offices, and FHWA ~~and~~ MPO/COG representatives]

Team Member	Items to Gather for Initial Scope Project Meeting
Program Manager	<u>Purpose and need of project. Scope of project (construction, reconstruction, Non-Freeway resurfacing, restoration and rehabilitation (3R)). Logical Termini for project, Fiscal Year Obligation Commitments. Estimated project schedule.</u>
<u>RPG Design Office</u> <u>Preliminary Design Office</u> <u>(Including, when applicable, Road Design, Hydraulic Design, Bridge Design, Roadway Structures Design, and Geotechnical Design)</u> <u>District Office</u>	<u>Gather available plans, and reports relevant to the project corridor. , aerials, etc. (SI&A reports, soil information, aerial photos, functional classifications)</u>
Traffic Engineering	Gather available traffic and accident information currently on file.
<u>Environmental Office</u>	<u>Gather available Environmental Information</u>
<u>Road/Bridge Design Office</u>	<u>Provide all information currently being held in design groups' files.</u>
<u>Planning Office</u>	<u>Gather available Planning Information</u>
Utilities Office	Determine if corridor has major utility distribution/collector lines (Exact location not required at this time).
<u>Program Controls</u>	<u>Collect project information to establish draft project schedule</u>
<u>Geotechnical Design District Office</u>	<u>Gather existing soil information, etc. Gather information to assist in preliminary design</u>

[For all Federal aid projects, the FHWA environmental and operations representative needs to be part of

the review. ~~At this early stage of development, the FHWA Operations Engineer needs to also be part of the review of all federal aid projects in order to assist in developing the Statewide Transportation Improvement Program (STIP)]~~

- Schedule and conduct office/field review, allowing a minimum of two weeks advance Notice.
 - Define Termini,
Purpose of Project – Program Manager (PM020)
- Identify public involvement requirements/methods. Complete public involvement form. – Program Manager
- Prepare and distribute “minutes” from initial project meeting – Program Manager

Departments listed below should be contacted and possibly added as a member to the project development team as necessary

- ☐ ~~Gather available Environmental Information – Environmental Office~~
- ☐ ~~Gather available Planning Information – Planning Office~~

- Schedule and conduct office/field review, allowing a minimum of two weeks advance

~~notice and insuring local participation by MPO/COG representative. Define Termini,
Purpose of Project—Program Manager~~

- ~~• Prepare/distribute “minutes” from initial project review—Program Manager~~
- The Bridge Construction Office should be used as a resource by the Project Development Team on bridge projects as necessary.
- Traffic Control office may also need to be involved early in the design phase to address constructability concerns.
- Landscape Architect included in initial project review if landscaping is an early requirement —of the project or likely to be an element of the project – Program Manager
- Railroad Projects Office – Railroad projects office to provide information regarding requirements and future plans
- Research and Materials Lab – See EDM 15 for pavement type selection process.

~~• Collect project information to establish draft project schedule—Program Controls Unit~~

3. Initial Cost Estimates

- Request cost estimate – Program Manager
- Coordinate the gathering of cost estimates from all affected sections, such as RPG, Right of Way, Utilities, Railroad Projects Office, Traffic Engineer, etc.—Value Engineer
- Compile and distribute cost estimate for review & comments – Value Engineer
- Distribute cost estimate to the appropriate funding authority – Program Manager
- Forward information to FHWA on all projects – Program Manager
- With Program Manager, coordinate with MPO/COG, etc., and ~~modify~~include project in STIP;
as appropriate – Planning Office

4. Resource Evaluation

- Determine if outside design resources will be necessary for the project- Program Manager, Design Manager, RPG Engineer
- Revise schedule based on time necessary to issue notice to proceed for outside design resources – Program Manager

54. Program Action Request (PAR) ~~Completed~~Submitted

- ~~• Prepare and submit PAR, with proposed schedule and minutes from Scoping Meeting —attached [including establishing bridge pins, as appropriate]—Program Manager~~
- ~~Determine use of outside resources— Set-up Estimate funding for Consultant and In-House Services as needed – Program Manager~~
- Include Railroad preliminary engineering cost in PE budget as needed – Program Manager
as needed – Program Manager
- Prepare and submit PAR-, with proposed schedule and minutes from Scoping Meeting attached [including establishing bridge pins, as appropriate]
(<http://iwww.dot.state.sc.us/Intranet/preconstruction/docs/PARProcedures.pdf>)

<http://iwww.dot.state.sc.us/Intranet/preconstruction/docs/PAR.pdf> – Program Manager (PM010)

56. Project Authorization Received – Preliminary Engineering Funding Approved

- Immediately notify Program Manager once charge code is established – Preconstruction Resource Management ([PCM005, PCM 010](#))
- ~~Coordinate the establishment of the Project Development Team.~~ Notify [PDT team members](#) of project information ([File Number, PCN, and Charge Code](#)) – Program Manager
~~[Note: Offer the opportunity to all offices noted in the 1% phase to be included on team, including the FHWA and the Landscape Architect as needed]~~

6.7. Surveys/~~Digital Mapping/~~Geotechnical Data Requested and Initial Studies Requested

- Coordinate and conduct a comprehensive Project Development Team field review, including a thorough review of the project survey, subsurface utility engineering, and preliminary geotechnical requirements with a representative of the survey crew and utility office – Program Manager ([PM020](#))
- Identify areas that may need geotechnical data to facilitate design – RPG Geotechnical Design
- [Identify wetland boundaries for survey crew to locate when surveying – Environmental Office](#)
- Prepare project-specific portion of eminent domain ad and submit along with PCN & charge code to Environmental Office – Program Manager ([PM025](#))
- [Submit first bridge letter for bridge replacement projects \(see EDM 36\) – Program Manager](#)
- ~~Complete preparation~~ [Submit of eminent domain advertisement to appropriate media outlets and submit for advertisement –](#)
- Environmental Office ([ENV010](#))
- Prepare and submit request for accident summary and reports – Program Manager
- ~~Send press release/notification to Communications and Creative Services and to District Offices of possible road closures due to bridge construction – Program Manager~~
- Prepare the survey and SUE request, allowing a brief review period for the ~~PDT project~~ [Production Team and then submit the survey and SUE request to the Surveys - RPG Roadway Geotechnical Design \(\[RDPD010, SURV010\]\(#\)\)](#)
- [Submit application, fees, and insurance requirements to railroad for approval 60 days prior to conducting surveys or geotechnical borings on railroad right of way – Railroad Projects Office](#)
- [Select and contract with Consultant \(SUE, Mapping,...\), when requested by Project Development Team](#)
[and provide SUE data, upon completion, to RPG Roadway Design – Survey/Office](#)

- [Note: If follow-up survey requests become necessary, for instance, to extend a side road or ditch survey, the request will be prepared and submitted by RPG Roadway Design]
- Once survey data check is complete, submit survey information to RPG Roadway Design and notify
 - the Program Manager (via E-mail) – Surveys Office (SURV020, SURV030, SURV040, SURV130, SURV140, SURV150)
 - Request preliminary soil borings from Office of Materials and Research in areas needing geotechnical study including areas identified by the Landscape Architect where landscaping is planned – RPG Geotechnical Design
 - Submit preliminary geotechnical letter to Project/Program Management – RPG Geotechnical Design
 - Coordinate with local public agencies and Landscape Architect, as needed, to determine desired scope project scope – Program Manager
 - Select and contract with SUE Consultant, when requested by Project Development Team and provide SUE data, upon completion, to RPG Roadway Design – Survey/Office

[Note: If follow-up survey requests become necessary, for instance, to extend a side road or ditch survey, the request will be prepared and submitted by RPG Roadway Design]
 - Prepare and submit requests for traffic data and analysis to the Director of Traffic Engineering, including pavement loading – RPG Roadway Design (RDPD020)

[Note: Receipt of Project Authorization Form 10 will trigger RPG Roadway Design to initiate the above task]
 - Prepare and submit requests for pavement design to Pavement Design Engineer – RPG Roadway Design (RDRW042, RDRW043)
 - Perform intersection analysis on major intersections on request of Program Manager – Traffic Engineering

78. Preliminary Design Plans Developed and Conceptual Bridge Plans (if required)

- Develop Design Criteria Report for PM approval – RPG Roadway Design
- Plot existing topography and determine plan sheet layout – RPG Roadway Design (RDPD010)
 - Develop Design Criteria Report for PM approval – RPG Roadway Design (RDPD027)
 - Request Bridge Hydrology Design – RPG Roadway Design (RDPD020, HY010)
 - Coordinate the development of a detailed project schedule – Program Manager
 - Prepare design (noting (in design notebook and copying PM) any changes made to minimize impacts to natural resources) – RPG Roadway Design, RPG Bridge Design, RPG Roadway Structural Design (RDPD030)
 - For projects requiring alternative geometric designs, Value Engineer to prepare comparative cost estimates – Program Manager
 - Place preliminary design onto existing topography and develop preliminary plans – RPG Roadway Design (RDPD040)

- If necessary, distribute the design for review to all members of the Project Development Team to review – Program Manager
- If necessary, distribute to Preconstruction Support (thru PM) for QA review of design criteria, geometric design, pedestrian and bicycle accommodations, landscaping – RPG Roadway Design and/or RPG Bridge or Structural Design
- Perform “Line and Grade” Design Field Review (see IB 2006-7), noting any potential design exceptions – RPG Roadway Design (RDRW060)
- Perform intersection analysis on major intersections on request of Program Manager –
 - Traffic Engineering
- Distribute to Preconstruction Support for QA review of design criteria, geometric design, pedestrian and bicycle accommodations, landscaping – RPG Roadway Design and/or RPG Structural Design
- Develop Traffic Management Plan (TMP) for Program Manager to complete and forward to Traffic Engineering – RPG Roadway Design (RDRW0401, RDRW0601)
- Distribute to Traffic Engineering for review and recommendation of Traffic Design Review Section – RPG Roadway Design
- For projects requiring alternative geometric designs, prepare comparative cost estimates – Value Engineer
- Distribute the design for review/comments including a constructability review to
 - all members of the Project Development Team including Geotechnical Design; any
 - potential design exceptions will be noted – RPG Roadway Design
- Distribute the design and TMP to the Director of Construction Office thru Program Manager for constructability review preliminary
- —— construction review (see EDM PC-11, dated July 9, 2001) – RPG Roadway Design, RPG Bridge and Structures Design
- Distribute plans and cross sections to RPG Hydraulic Design to initiate drainage design- RPG Roadway Design (RDRW065, HY090)
- Request permit determination from Environmental Office – Program Manager
- Verify receiving streams for project then check if listed on SCDHEC’s most current 303(d) list and table for total maximum daily loads (TMDL) – RPG Hydraulic Design
- Complete floodplain checklist – RPG Hydraulic Design
- Send a copy of the geometric design to MPO/COG and any other local non-SCDOT team members for review and comments, as appropriate – Program Manager
- Request MPO/COG to have the Municipal Agreement signed, as applicable – Rights of Way Section
- For road projects programmed on the National Highway System (NHS) with an estimated total cost (including PE, R/W and Construction) in excess of \$25 million, or \$20 million for bridge projects on the NHS, initiate and coordinate value engineering review – Value Engineer/Program Manager
- Review and revise if necessary the project schedule – Program Manager

8.9. Utility and Railroad Preliminary Coordination

- For Railroad involvement, RPG Roadway Design to contact the Rights of Way-Railroad Projects Office to review the project and determine what needs to be provided in

Preliminary Design Plans submittal to the Railroad ~~Company~~ – ~~Preliminary Design Engineer~~ — RPG Roadway Design

- Conduct Utilities Coordination Meeting, when applicable – Utilities Office and Program Manager
- Determine if environmental permits should include impacts for relocating utilities – Utilities office and Environmental Office

910. Design Review Meeting Conducted, Project Design Finalized

- Analyze written comments received from preliminary design review process – Program Manager with RPG Roadway Design and/or RPG Bridge and Roadway Structural Design
- Schedule/conduct office and, if necessary, field review with the Project Development Team to review comments and team members sign-off on revision/addition to preliminary design then resolve all design issues before finalizing the preliminary design – RPG Roadway Design and/or RPG Bridge Structural Design
[Note: Provide one week minimum advance notice]
- On construction slopes, determine whether to require Fee Simple right of way or Slope Permission- Program Manager
[Note: Obtain input from the Rights of Way staff. See memorandum dated September 12, 2001, from the Director of Preconstruction]
- Identify proposed structures that may require geotechnical investigation and submit to RPG Geotechnical Design to determine areas requiring geotechnical investigations – RPG Bridge Structural Design and RPG Roadway Structural Design and RPG Roadway Design
- ~~Identify possible structures to be built or modified including culverts, nonstandard drainage items, sound barrier walls, and retaining walls – Program Manager~~
- With the assistance of ~~Program Design~~ Manager and RPG Geotechnical Engineer Design, Value Engineering to develop ~~create~~ a cost estimate for possible retaining walls – RPG Roadway Structural Design and RPG Roadway Design
- Evaluate alternatives to retaining walls, e.g. purchasing additional right of way, changing alignment, etc., to determine most appropriate design – ~~Program Design~~ Manager
- For roadway projects complete geotechnical checklist to determine if a geotechnical investigation should be performed. – RPG Roadway Design
- Establish proposed boring locations & request Right of Way to obtain drilling access permission – RPG Geotechnical Design
- Request preliminary soil borings from Office of Materials and Research in areas needing geotechnical study including areas identified by the Landscape Architect where landscaping is planned – RPG Geotechnical Design

- Add proposed boring locations as determined by RPG Geotechnical Design to plans – RPG Roadway Design

1011. Design Revised, As Necessary

- Update cost estimates to relate to revised geometric design (Optional, if needed) – Value Engineer
- Review and revise, as necessary, the project schedule – Program Controls Unit and PM
- Complete and distribute copies of the final preliminary design to all members of the Project Development Team including-excluding Program Controls – RPG Roadway Design
- Coordinate review of cost estimate and resolve the differences, if necessary – Program Manager
- ~~Place preliminary design onto existing topography and develop preliminary plans – RPG Roadway Design~~
- ~~With the help of the SCDOT Highway Design Manual and the~~ RPG Roadway Structural Design Office to, create list of facing options for visible structures to be presented at the Public Hearing – Program Manager
- Incorporate changes requested by Railroad after PM's approval and resubmit revised design to Railroad company – RPG Roadway Design and Railroad Projects Office

DRAFT

1112. Project Planning Report (PPR) Submitted – Environmental Studies & Document Initiated

- Prepare and submit project planning report to the Environmental Office with a copy circulated through the appropriate offices – Program Manager– (PM030)
[Note: PPR's shall be shared with the RPG Bridge Structural Design Office for projects involving a bridge]
- Submit a copy of the project planning report to the State Energy Office and FHWA, as appropriate – Environmental Office
- On all consultant projects involving multilaning or new location construction where the consultant is responsible for preparing the environmental document, complete the project planning report concerning transportation efficiency and forward it to the Environmental Office for transmittal to the State Energy Office – Program Manager
- ~~Review project schedule with Project Development Team and determine appropriate~~

~~estimated completion date for approved environmental document and public hearing~~

~~displays – Program Manager~~

~~• Prepare environmental document – Environmental Office~~

• Develop EFH impacts for road and bridge projects in tidal areas – Program Manager

• ~~Coordinate~~ Initiate design exceptions process identified by road, bridge, and hydraulic design and interchange modification request – Program Manager

• Request Traffic Engineering to begin Interchange Modification Report (IMR) or Interchange Justification Report (IJR) and all other traffic studies that may be necessary- Program Manager

• Provide conceptual landscaping information as related to right of way acquisition, as necessary – Landscape Architect

~~• Prepare the Interchange Modification Report and all other traffic studies that may be necessary – Traffic Design Engineer~~

• Request MPO/COG to have the Municipal Agreement signed, as applicable –Program Manager

• Begin preparing environmental document – Environmental Office (ENV020, ENV030, ENV040, ENV050, ENV060, ENVCE010, ENVEA010, ENVEA0101)

• Review project schedule with Project Development Team and determine appropriate estimated completion date for approved environmental document and public hearing

displays – Program Manager

1213. Environmental Document Submitted for Approval

- Distribute environmental document to the Program Manager and FHWA for review and comment – Environmental Office

[Note: Program Manager may request input from Project Development Team concerning the environmental document]

- Revise Environmental document, as necessary, and submit document for FHWA's approval [Also, notify Program Manager via e-mail that document has been submitted] – Environmental Office (ENVEA0102)

1314. Environmental Document Approval Received

- Distribute copy of the approved document to the Program Manager - Environmental Office

- Coordinate ~~with Program Manager~~ and prepare the public hearing booklet if required – Environmental Office and Program Manager
- Determine if visualization techniques are needed. Coordinate with Rights of Way, Environmental, and RPG Roadway Design~~Program Development~~ – RPG Roadway Design~~Program Manager~~
- Review information with Environmental Office to be placed on public hearing display and contact RPG Roadway Design Office to prepare display – Program Manager
- Complete the preparation of the public hearing displays – RPG Roadway Design
- Arrange appropriate location/date for public hearing – Program Manager
[Note: Program Manager to coordinate with Environmental Office and Communications & Creative Services to insure that all appropriate SCDOT, FHWA, MPO/COG, elected officials and other personnel are notified of the hearing]
- Request public hearing sign panels and coordinate the installation of the public hearing signs with District staff – Program Manager
- Prepare project-specific portion of public hearing advertisement and submit to Environmental Office – Program Manager
- Complete the preparation of the public hearing advertisement and submit appropriately – Environmental Office
- Review public hearing displays with appropriate staff and FHWA, a minimum of three weeks prior to the public hearing – Program Manager
- Review Public Hearing display with the City or Town Leaders, if located within the municipal limits,
- Rrequest execution of Municipal State Highway Project Agreement. Submit executed Agreement to the Rights of Way Office – Program Manager
- Send copies of public hearing plans, environmental document, etc., at least two weeks (15 days) prior to the public hearing, to the District Office and to the local contact person as identified on the public hearing signs – Program Manager
~~Submit executed Agreement to the Rights of Way Office~~ – Program Manager
- Send formal notice of the public meeting to all utility companies involved on the project at least two weeks prior to the meeting requesting their attendance – Program Manager

1415. Design Public Hearing Completed

- Coordinate/conduct public hearing – Program Manager
[Note: Encouraging MPO/COG staff to actively participate]
- Respond to public hearing comments – Program Manager
- ~~Prepare public hearing certification package and submit to FHWA – Environmental Office~~
- Revise preliminary design plans, as necessary, and distribute to all Project Development Team members – RPG Roadway Design
- Develop right of way plans with final input from the PPT-PDT – RPG Roadway Design
- ~~Request updated cost estimates from value engineer [route request through the Regional Production]~~
-Program Manager
- Estimate the cost of utility relocation particularly those that have prior rights-Utilities Office
- Estimate cost of any wetland mitigation effort – Environmental Office
- ~~Update cost estimates – Value Engineer~~
- Review and revise, as necessary, the project schedule – Program Controls Unit and PM
- Distribute updated cost estimate to the Project Development Team including the FHWA - Program Manager
- Coordinate the resolution of any substantial changes in the cost estimate and initiate any necessary STIP adjustment – Program Manager
- When retaining walls have been selected as the most appropriate alternative for the site, Notify RPG Roadway Structural Design Office of required facing to be used (selected from the list of options created during preliminary design) – Program Manager

1516. Environmental Permit(s) Submitted

- After hydrology defines outfall and ditch requirements ~~p~~Prepare necessary permit application(s), review with program manager, and submit appropriately – Environmental Office (ENV030, ENV060)
[Note: Permit applications should include impacts caused by relocation of utilities]
- Coordinate the resolution of any issues raised by permitting agencies – Environmental Office (ENVP010)

1617. Preliminary Right of Way Plans Completed (RDRW085)

- Review and update project schedule with Project Development Team – Program Manager
- Prepare preliminary right of way plans, cross sections, etc., necessary for a Design Field Review (DFR) coordinated with Project Development Team and schedule a DFR – RPG Roadway Design Office
[Note: Program Manager will send plans to MPO and COG team members]
- Provide conceptual signing and traffic signal/ITS information as related to right of way acquisition, as necessary – Traffic Engineering
- Send typical section sheets to Pavement Design Engineer to verify pavement design – RPG Roadway Design
- Contact Utilities Office to review preliminary right of way plans to ensure all needed information is included on plans – RPG Roadway Design

- Identify-Verify proposed structures that may require geotechnical investigation and submit to
RPG Geotechnical Design to determine areas requiring geotechnical investigations – RPG Bridge Structural Design and with RPG Roadway Structural Design and RPG Roadway Design
- Develop Preliminary Bridge Plans- RPG Bridge Structural Design

1718. Design Field Review (MOVE TO BEFORE DRAFT ENVIRONMENTAL SUBMITTED FOR APPROVAL, AS NECESSARY (Task 13))

- Coordinate and conduct a Design Field Review (DFR) providing a thorough field review of the preliminary plans by the Project Development Team, to include the District Utility Coordinator, beginning with an office review followed by an on-site inspection – RPG Roadway Design
- Revise plans in accordance with comments from the DFR and provide revised plans, cross sections, etc., to the Project Development Team – RPG Roadway Design
- ~~Provide revised plans to RPG Hydraulic Design Office to initiate drainage design and then notify Program Manager (via email) that this task has been completed – RPG Roadway Design~~
- Provide road plans, including plan and profile, cross-sections, pavement designs, and typical sections to Work Zone Traffic Control Coordinator in Traffic Engineering to begin preparation of work zone traffic control staging plans – RPG Roadway Design
- Provide revised plans (~~1 full & 1 half size~~) including cross sections to RPG Geotechnical Design
– RPG Roadway Design
- Provide proposed structure design criteria to RPG Geotechnical Design – RPG Bridge Structural Design or RPG Roadway Structure Design
- Notify Signing & Marking Plans Preparation Engineer in Traffic Engineering upon completion of plan and profile sheets to permit scheduling of signing and pavement marking plans preparation – RPG Roadway Design
- Notify Signal Systems Engineer of new signals (identified by District Traffic Engineer or Traffic Engineering Studies) and/or signal ~~upgrades-replacements~~ – RPG Roadway Design Program Manager
- Traffic Engineering to submit IMR or IJR to Program Manager – Traffic Engineering
- Submit Final Interchange Modification/Justification Report~~quest~~ to FHWA – Program Manager
- Meet with Utility Companies to begin early coordination – District Office
- Review and revise, as necessary, the project schedule – Program Manager

1819. Geotechnical Investigations & Reports

- Coordinate with Environmental Design-Office to determine if site is historically significant or if

there is soil, surface water, or subsurface water contamination – RPG Geotechnical Design

- Request subsurface investigations for proposed structures – RPG Geotechnical Design
- Provide structure plan and profile and structure loading to RPG Geotechnical Design – RPG Bridge Structural Design or RPG Roadway/Bridge Structure Design
- Provide final geotechnical report including final structure recommendations to RPG Structural Design – RPG Geotechnical Design
- Provide final geotechnical report including all relevant hydraulic parameters to RPG Hydraulic Design – RPG Geotechnical Design

1920. Structures Designed

- RPG Hydraulic Design to provide hydraulic requirements for bridge/culverts to RPG Bridge or Roadways Structure Design – RPG Hydraulic Design
- Establish retaining wall and culvert structure alignment and stationing, provide to RPG Roadway Design Group a sketch showing additional right of way needed due to structure footprint or construction requirements – RPG Roadway Structural Design ~~or RPG Roadway Design~~
- Design structure for construction plans based on information provided in the final geotechnical report – RPG Roadway Structural Design ~~or RPG Roadway Design~~
- Prepare plan, profile, and cross section drawings to be included in the construction plans - RPG Bridge and Roadway Structural Design ~~or RPG Roadway Design~~

2021. FONSI Submitted for Approval

- Review with the Program Manager any project changes that may have occurred since document approval, prepare the FONSI request, prepare public hearing certification package and allow Program Manager to review– Environmental Office
and allow Program Manager to review,
- and then ~~S~~submit public hearing certification package to FHWA – Environmental Office
[Note: Program Manager may share the FONSI request with the Project Development Team for comments]

2122. FONSI Approval Received

- Provide copy of approved FONSI to Program Manager – Environmental Office
- If necessary, c~~o~~ordinate with Environmental Office and prepare project-specific portion of advertisement that the FONSI is approved– Program Manager
[Note: If the project involves a Categorical Exclusion and a public hearing is held, the Program Manager will coordinate with the Environmental Office and insure that the appropriate Study Report and advertisement is prepared and submitted]

- Complete the preparation of the advertisement and submit appropriately – Environmental Office
- Prepare a summary memorandum and notify the Project Development Team of the Highlights of the Environmental Document and commitments SCDOT have made – Environmental Office (Chad wants to remove this section b/c all info is in doc. And FONSL.)

2223. Preliminary Right of Way Plans Field Review (see IB 2006-6)

- Examine the preliminary right of way plans with emphasis on the roadway drainage and the impact of the project to the adjacent properties. This review will also identify how new and existing right of way and roadway designs will impact construction – RPG Roadway Design
- Complete the drainage design and review with the Project Development Team – RPG Hydraulic Design
- Complete and submit work zone traffic control staging plans – Traffic Engineering
- Coordinate with the Construction Office and establish the Constructability Review Team and date of their review – Program Manager
Ref: SCDOT Construction Manual – Section 101.3.1 (Constructability Review)
- Perform constructability review (See EDM PC-11 July 2001) – Constructability Review Team

2324. Right of Way Plans Completed & Signed

- Review project schedule with Project Development Team and update as necessary - Program Manager
- Verify execution of Municipal State Highway Project Agreement, if required. If Agreement has not been executed, re-submit for execution by the City or Town. - Rights of Way Program Manager
- Provide completed right of way plans to the Landscape Architect to receive recommended landscaping – RPG Roadway Design
- Review and prepare Design Exceptions and forward through Program Manager to the Director of Preconstruction for approval – RPG Roadway Design, RPG Hydraulic Design, RPG Structures Design
- Notify Value Engineer [through Regional Production Engineer Program Manager] to initiate updated cost
estimates include updated cost on utility and wetland mitigation – Program Manager
- Review and revise, as necessary, the project schedule – Program Controls Unit
- Prepare updated cost estimates, utilizing input from R/W, Utilities, Traffic Engineering, Environmental, etc., as appropriate – Value Engineer
- Include right of way requirements around new or modified structures as provided by RPG Roadway Structural Design, Traffic Engineering (signals, signs, and ITS), Office – RPG Roadway Design
- Coordinate the resolution of any substantial changes in estimated costs and share the information appropriately – Program Manager

- Complete Quality Control review of right of way plans. Obtain necessary initials and submit to Roadway Design Support for quality assurance review. – RPG Roadway Design
- Complete QA Review of right-of-way plans and return comments to RPG Engineer – Roadway Design Support
- Complete the right of way plans, including resolution of review comments and routing for final signatures.
- Submit the signed r/w plans to Preconstruction Support to forward to Rights of Way Office and FHWA, as requested; notifying the Program Manager – RPG Roadway Design (RDRW140)
- Provide completed right of way plans to the Rights of Way Utilities Office and District Office to initiate final utility coordination and also final railroad coordination, as necessary if railroad involvement – RPG Roadway —Design (UT020, RDRW150)
- Provide signed right of way plans to Traffic Engineering to begin finalizing pavement marking, signing, signal, and traffic control plans. – RPG Roadway Design
- Send right of way plans to the District Office to initiate District utility coordination– Utilities Office

2425. Right of Way Funding Obligated & Acquisition Process Initiated

- Submit r/w cost estimate via email to PM for concurrence of amount prior to submitting to preconstruction resource management – Right of Way Office
- Submit right of way cost estimate to Preconstruction Resource Management– Rights of Way Section Office
- Coordinate the obligation of right of way funds and notify the Program Manager and Director of R/W immediately upon approval of funds – Preconstruction Management (PCM020, PCM030)
- Initiate R/W acquisition process – Right of Way Section

26. Utility and Railroad Coordination

- Begin coordination necessary to secure Utility Agreements and No-cost relocation sketches – District Office (UT010, UT030-UT440)
- Send right of way plans to the railroad with a detailed letter explaining the project as it affects the Railroad to initiate their preliminary engineering review for approval– Railroad Projects Office (UTRR010, UTRR020, UTRR030, UTRR090, UTRR100, UTRR110)

2527. Project Assessment

[Note: Project Development Team meets to ensure project commitments are being met. FHWA, MPO/COG representatives, and utility companies discuss with Project Development Team any project specific requirements that need to be included in the contract documents – Program Manager

- All project requirements as a result of field reviews, design exceptions, constructability reviews, and maintenance of traffic concerns are addressed – Program Manager

- Right of way special provisions, as a result of negotiations, provided to RPG Roadway Design and to Letting Preparation to be reflected in the plans or contract special provisions – Rights of Way Office
- All relocations will be completed prior to award, or the appropriate special provisions are provide to Road Design to be included in the contract special provisions as concurred by the FHWA – Right of Way Section
- Utility relocations, special requirements, funding, and other items as needed are in place and included in the contract as appropriate – Program Manager
- Local municipality needs are identified and included in the special provisions where appropriate. This could vary from lane closure restrictions for special events, to landscaping coordination, to coordination of preferred detour routing and signing – Program Manager
- Environmental commitments and constraints are provided to Program Manager and Design Manager RPG Roadway Design in order to be clearly indicated in the proposal and/or plans – Environmental Office
- ~~Contract durations are appropriate for the size and complexity of the project – Letting Preparation~~
- Cash flow requirements are discussed with the Finance Office and the overall status of the Program area will allow the project to proceed to completion – Program Manager
- ~~Other items as dictated by the individual project – Program Manager~~

2628. Construction Plans Review (optional) (PS&E Review (see IB 2006-9))

- Provide construction plans to the construction field office for review by the Resident Engineer – RPG Roadway Design Manager
- Provide bridge construction plans to the Bridge Construction Office for review – RPG Bridge Structures Design
- Examine the construction plans for completeness with emphasis on the estimated quantities. District may add or revise quantities as deemed necessary to construct the project. Make changes to quantities on the summary of estimated quantities sheet sent by RPG Road and Bridge Design—Manager. A field review may be held but is not required - District/Resident Engineer
- If a pavement design is older than 3 years determine need for a Pavement Design Review. Resubmit forms for traffic information and pavement design, as needed – RPG Roadway Design

29. Finalize Utility Coordination/Relocation

- All Utility Agreements and No-cost relocation sketches received from the District are reviewed, approved, and utilities are authorized to begin work 2 months prior to letting – Utilities Office (UT450)
- Engineer of Record begins writing and researching special provisions and/or supplemental specifications as indicated by Design Group – Design Manager

- Verify PCN & charge code established for utility relocations 3 months prior to letting – Program Manager

2730. Construction Plans Completed & Signed

- Request right of way revisions to plans subject to approval by Program Manager – Rights of Way Office
- Finalize box culverts, retaining wall and shoring designs; provide details to RPG Roadway Design for plans – RPG Roadway Structural Design
- Provide pavement marking, signing, traffic signal/ITS plans, special provisions and updated staging plans as necessary to RPG Roadway Design –Traffic Engineering
- Provide to RPG Roadway Design any required special provisions or estimates – Landscape Architect
- ~~Determine need for a Pavement Design Review. Resubmit forms for traffic information and pavement design, as needed – RPG Roadway Design~~
- Complete road construction plans including structure plan, profile, and cross section sheets as provided by RPG Roadway Structural Design – RPG Roadway Design
- – RPG Roadway Design
- Input quantities into PES- RPG Roadway Design and RPG Bridge Structures Design
- Complete bridge construction plans, complete special provisions and estimates —~~Letting Preparation~~—RPG Bridge Structural Design
- Complete Quality Control review of Construction Plans. Obtain necessary initials and submit to Roadway Design Support and/or Structural Design Support for quality assurance review. – RPG Roadway Design and/or RPG Bridge Structure Design
- Complete QA Review of Construction Plans and return comments to RPG Engineer – Roadway Design Support and/or Structural Design Support
- Complete the Construction Plans, including resolution of review comments and routing for necessary signatures – RPG Roadway Design
- ~~Include structure plan, profile, and cross section sheets as provided by Structural Design – RPG Roadway Design~~
- Complete NOI/SWPP package and submit to engineer of record for signature – RPG Hydraulic Design

28. Finalize Utility Coordination/Relocation

- ☐ ~~All Utility Agreements and No-cost relocation sketches received from the District are Review, approved, and utilities are authorized to begin work – Utilities Office~~
- ☐ ~~Contract Documents Office begins writing and researching special provisions and/or supplemental specifications as indicated by Design Group – Letting Preparation~~

2931. Contract Proposal Preparation

- Complete Special Provisions and submit to Letting Preparation Engineer – Engineer of Record
- Complete engineers' estimate in PES for use by Program Manager, Contracts Administration and Preconstruction Resource Management – Letting Preparation
- Complete cost estimate updates including review of PE and R/W expenditures and remaining budgets – Value EngineerProgram Manager
- Complete special provisions and prepare proposal for printing – Letting Preparation
- Provide opportunity for PM and DM to review final proposal – Letting Preparation
- Coordinate the resolution of any substantial changes in the estimated costs and share the information appropriately – Program Manager
- On large projects, prepare a CPM schedule to establish reasonable construction schedule - Construction Office
- Conclude participation agreement with governmental entities concerning maintenance of landscaping – Program Manager
- Evaluate project for a minimum required contractor performance score- Director of Construction
- Submit NOI package (NPDES) to Director of Construction Office – Design Manager

3032. PS&E Submittal and Environmental Permit(s) Approved

- Upon receipt of approved permits, notify Program Manager – Environmental Office
- and then Distribute copies of approved permits as necessary – Environmental Office
appropriately – Environmental Office
- [Notify FHWA of permit approval dates or problems encountered] – Environmental Office
- Right of Way acquisition process completed, with all tracts either acquired or condemned – Rights of Way Office
[FHWA needs Right of Way certificate on all Interstate projects and projects greater than \$50 million on the National Highway System] and other projects by request of FHWA (See FHWA Oversight Agreement)
- Right of Way Certification provided to FHWA, PM, Letting Preparation and Director of Construction Office – Right of Way Office
- Submit PS&E package to FHWA, as appropriate – Preconstruction ManagementLetting Preparation Engineer
- Coordinate Obligation of funds. Receive and distribute FHWA Project Authorization Approval – Preconstruction Resource Management (PCM040, PCM050).
- Distribute Utility Agreements and/or relocation sketches – Utilities Office
- Prepare and publish ad for highway letting for project – Contracts Administration
- Conduct Pre-Bid Meetings on large and multi-phased projects, address utility conflict issues and if necessary prepare addenda to disseminate the minutes and Q&A from the Pre-Bid meeting – Director of Construction Office

3133. Construction Bids Received

- As soon as possible after bid opening, submit bid information to appropriate Program Manager – Contracts Administration ([PCM060](#))
- Coordinate the resolution of any substantial differences between bid and STIP amounts – Program Manager
- Coordinate contract award with the FHWA on all oversight projects, provide necessary bid information – Contracts Administration
- As soon after bid opening as possible, load bid information into TrnsPort Program in order to analyze the bid and to expand the bid history – Contracts Administration
- [Invite PM to Bid Review Committee Meeting to review bids for award/reject recommendation – Director of Construction Office](#)

3234. Award Project – Monitor Project Expenditures & Report Periodically to MPO, COG

- Notify Program Manager [via email](#) upon approval of award – Contracts Administration
- Schedule/conduct preconstruction conference – Resident Construction Engineer
- Provide information periodically to Program Manager on status of construction and construction expenditures, upon request – Construction Office
- Provide information periodically to Program Manager on status of condemnation cases, R/W hold offs, and remaining anticipated R/W expenditures, upon request – Rights of Way Office
- Distribute Railroad Agreements to the appropriate railroad company – Rights of Way Office ([UTRR040](#), [UTRR050](#), [UTRR060](#), [UTRR070](#), [UTRR080](#), [UTRR120](#), [UTRR130](#), [UTRR140](#), [UTRR150](#))
- [Verify invoices for utility relocations are paid. Notify PM – Utilities Office \(UT460\)](#)

~~1st Revision January 13, 1999~~

~~2nd Revision February 3, 1999~~

~~3rd Revision April 11, 2000: Included information concerning design exceptions to page 3~~

~~4th Revision August 6, 2001~~

~~5th Revision August 31, 2001~~

~~6th Revision November 30, 2001~~

~~7th Revision April 15, 2002~~

~~8th Revision June 24, 2002~~

~~9th Revision January 17, 2003~~

~~10th Revision February 12, 2003~~

~~11th Revision April 22, 2003~~

~~12th Revision January 25, 2005 – Revisions highlighted~~

~~13th Revision March 15, 2005 – Revisions highlighted~~

~~14th Revision May 9, 2005 Revisions highlighted~~~~15th Revision July 6, 2005 Revisions highlighted~~~~16th Revision February 1, 2006 Revisions highlighted~~~~17th Revision June 26, 2006 Revisions highlighted~~~~18th Revision July 18, 2006 Revisions highlighted~~~~19th Revision August 13, 2009 Revisions highlighted~~~~20th Revision September 18, 2009 Revised to indicate new organizational structure. Reworked first few activities.~~Overhauled January 2010

DATES FOR ASSEMBLING INFORMATION ON CONSTRUCTION OBLIGATIONS FOR FEDERAL FISCAL YEAR 2010 BEGINNING WITH OCTOBER 2009

6/12/2009

OBLIGATION MONTH →	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT
\$ If project has full FHWA oversight, submit Complete Plans ¹ to Preconstruction Support for QA review.	17-Jul	17-Aug	22-Sep	18-Oct	13-Nov	18-Dec	15-Jan	12-Feb	19-Mar	19-Apr	21-May	21-Jun
\$ If project has full FHWA oversight, submit Complete Plans ¹ to the Preconstruction Support Operations Center to prepare PS&E.	14-Aug	14-Sep	20-Oct	18-Nov	11-Dec	15-Jan	12-Feb	15-Mar	16-Apr	17-May	21-Jun	19-Jul
* For all other projects, submit Complete Plans ¹ to Preconstruction Support for QA review.	24-Aug	21-Sep	20-Oct	23-Nov	18-Dec	15-Jan	22-Feb	22-Mar	16-Apr	21-May	21-Jun	26-Jul
\$ Letting Preparation Engineer submits PS&E to FHWA for full oversight projects.	4-Sep	5-Oct	10-Nov	7-Dec	1-Jan	8-Feb	8-Mar	5-Apr	7-May	7-Jun	12-Jul	9-Aug
* All Letting Plans ² checked, signed and submitted to the Operation's Center.	21-Sep	19-Oct	24-Nov	21-Dec	15-Jan	22-Feb	22-Mar	19-Apr	21-May	21-Jun	26-Jul	23-Aug
* Primary Meeting to review project Obligation Schedules.	22-Sep	20-Oct	25-Nov	22-Dec	19-Jan	23-Feb	23-Mar	20-Apr	25-May	22-Jun	27-Jul	24-Aug
Letting List completed and distributed to staff.	24-Sep	22-Oct	25-Nov	23-Dec	21-Jan	25-Feb	25-Mar	22-Apr	27-May	24-Jun	29-Jul	26-Aug
\$ Engineer's Estimate complete. Staff to submit Right of Way & Utility Certificates, etc. to Obligation Management Office for FHWA authorization process.	16-Oct	20-Nov	18-Dec	15-Jan	19-Feb	19-Mar	16-Apr	21-May	18-Jun	23-Jul	20-Aug	17-Sep
\$ FHWA to authorize projects.	23-Oct	27-Nov	28-Dec	22-Jan	26-Feb	26-Mar	23-Apr	28-May	25-Jun	30-Jul	27-Aug	24-Sep
* Letting Review Meeting.	26-Oct	30-Nov	29-Dec	25-Jan	1-Mar	29-Mar	26-Apr	31-May	28-Jun	2-Aug	30-Aug	27-Sep
All Ad Information completed for Contracts Administration Office.	28-Oct	2-Dec	30-Dec	27-Jan	3-Mar	31-Mar	28-Apr	2-Jun	30-Jun	4-Aug	1-Sep	29-Sep
Plans to Engineering Reproduction Services.	29-Oct	3-Dec	31-Dec	28-Jan	4-Mar	1-Apr	29-Apr	3-Jun	1-Jul	5-Aug	2-Sep	30-Sep
* Advertisement printed in newspaper and posted on SCDOT website.	2-Nov	7-Dec	4-Jan	1-Feb	8-Mar	5-Apr	3-May	7-Jun	5-Jul	8-Aug	6-Sep	4-Oct
Proposals to Engineering Reproduction Services.	5-Nov	10-Dec	7-Jan	4-Feb	11-Mar	8-Apr	6-May	10-Jun	8-Jul	12-Aug	9-Sep	7-Oct
* Plans and Proposals available to Contractors.	10-Nov	15-Dec	12-Jan	9-Feb	16-Mar	13-Apr	11-May	15-Jun	13-Jul	17-Aug	14-Sep	12-Oct
Deadline for addenda to bid packages.	2-Dec	6-Jan	3-Feb	3-Mar	7-Apr	5-May	2-Jun	7-Jul	4-Aug	8-Sep	6-Oct	3-Nov
Date of Letting. →	8-Dec	12-Jan	9-Feb	9-Mar	13-Apr	11-May	8-Jun	13-Jul	10-Aug	14-Sep	12-Oct	9-Nov

¹ Complete Plans contain all applicable initials from Department production staff (design leads, Design Manager, and Program Manager). Complete Plans are not required to be signed and sealed by the Engineer of Record unless deemed necessary as part of a contractual agreement governing the development of the plans.

² Letting Plans have completed all required quality assurance reviews and contain all applicable initials from Department production and support staff. Letting Plans are required to be signed and sealed by the Engineer of Record.

*SIGNIFICANT MILESTONES

\$ FHWA Requirement

APPENDIX C

Proposed Project Development Process

PRECONSTRUCTION PROJECT DEVELOPMENT PROCESS

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January 2010

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DRAFT

Preconstruction Project Development Process

Showing Sub-Tasks & Responsible Party

Note: The Program Manager is the project leader and will lead the Project Development Team (PDT) throughout this process in order to move the project to completion. Changes should be conveyed to the Project Development Team as soon as possible. The process below assumes the project has a defined purpose and need and is approved by the Commission and is included in the State Transportation Improvement Plan (STIP). Candidate projects (or groups of projects) would normally be identified in accordance with Legislative Act 114 through coordination with the Planning Office and the Metropolitan Planning Organization (MPO) or Council of Government (COG). Local Public Agency projects developed by the Department may follow an abridged process.

The attached chart “Dates for Assembling Information on Construction Obligations” should be followed where applicable.

1. Advanced Project Planning Report (APPR) and Corridor Feasibility Studies (CFS)

- The Office of Planning works with MPOs and COGs to identify eligible projects and facilitates their inclusion in their Transportation Improvement Plans (TIP) and the STIP. Whenever a major widening or new location project is selected from a long-range plan for inclusion in the STIP, the Planning Office develops an Advanced Project Planning Report (APPR) or Corridor Feasibility Study (CFS). An APPR and CFS is a document that identifies impacts to the surrounding environment and communities. The SCDOT Program Manager should have an approved (by MPO or Local Representative) APPR developed by Planning Office for the proposed project prior to scoping the project and requesting authorization of funding for design services from the Federal Highway Administration (FHWA).

2. Initial Project Development Team Meeting (Scoping Meeting)

The purpose of this meeting is to explain the purpose and need of the project for the Project Development Team – Program Manager

- Coordinate establishment of the Project Development Team (PDT) – Program Manager [RPG Design Staff, Support Design Staff, Surveys, Environmental, Utilities, Right of Way, Railroad Projects Office, Traffic Engineering, Program Controls, Cost Estimating, District Engineering Offices, and FHWA]

Team Member	Items to Gather for Initial Project Meeting
Program Manager	Purpose and need of project. Scope of project (construction, reconstruction, Non-Freeway resurfacing, restoration and rehabilitation (3R)). Logical Termini for project, Fiscal Year Obligation Commitments.
RPG Design Office (Including, when applicable, Road Design, Hydraulic Design, Bridge Design, Roadway Structures Design, and Geotechnical Design)	Gather available plans, and reports relevant to the project corridor. (SI&A reports, soil information, aerial photos, functional classifications)

Traffic Engineering	Gather available traffic and accident information currently on file.
Environmental Office	Gather available Environmental Information
Planning Office	Gather available Planning Information
Utilities Office	Determine if corridor has major utility distribution/collector lines (Exact location not required at this time).
Program Controls	Collect project information to establish draft project schedule
District Office	Gather information to assist in preliminary design

[For all Federal aid projects, the FHWA environmental and operations representative needs to be part of the review.

- Schedule and conduct office/field review, allowing a minimum of two weeks advance Notice – Program Manager
- Define Termini, Purpose of Project – Program Manager (PM020)
- Identify public involvement requirements/methods. Complete public involvement form – Program Manager
- Prepare and distribute “minutes” from initial project meeting – Program Manager

Departments listed below should be contacted and possibly added as a member to the project development team as necessary

- The Bridge Construction Office should be used as a resource by the Project Development Team on bridge projects as necessary.
- Traffic Control office may also need to be involved early in the design phase to address constructability concerns.
- Landscape Architect included in initial project review if landscaping is an early requirement of the project or likely to be an element of the project – Program Manager
- Railroad Projects Office – Railroad projects office to provide information regarding requirements and future plans
- Research and Materials Lab – See EDM 15 for pavement type selection process.

3. Initial Cost Estimates

- Request cost estimate – Program Manager
- Coordinate the gathering of cost estimates from all affected sections, such as RPG, Right of Way, Utilities, Railroad Projects Office, Traffic Engineer, etc.–Value Engineer
- Compile and distribute cost estimate for review & comments – Value Engineer
- Distribute cost estimate to the appropriate funding authority – Program Manager
- Forward information to FHWA on all projects – Program Manager
- With Program Manager, coordinate with MPO/COG, etc., and modify project costs and termini in STIP as appropriate – Planning Office

4. Resource Evaluation

- Determine if outside design resources will be necessary for the project- Program Manager, Design Manager, RPG Engineer
- Revise schedule based on time necessary to issue notice to proceed for outside design resources – Program Manager

5. Program Action Request (PAR) Submitted

- Estimate funding for Consultant and In-House Services as needed – Program Manager
- Include Railroad preliminary engineering cost in PE budget as needed – Program Manager
- Prepare and submit PAR, with proposed schedule and minutes from Scoping Meeting attached [including establishing bridge pins, as appropriate] (<http://iwww.dot.state.sc.us/Intranet/preconstruction/docs/PARProcedures.pdf>) (<http://iwww.dot.state.sc.us/Intranet/preconstruction/docs/PAR.pdf>) – Program Manager (PM010)

6. Project Authorization Received – Preliminary Engineering Funding Approved

- Immediately notify Program Manager once charge code is established – Preconstruction Resource Management (PCM005, PCM 010)
- Notify PDT of project information (File Number, PCN, and Charge Code) – Program Manager

7. Surveys and Initial Studies Requested

- Coordinate and conduct a comprehensive Project Development Team field review, including a thorough review of the project survey, subsurface utility engineering, and preliminary geotechnical requirements with a representative of the survey crew and utility office – Program Manager (PM020)
- Identify areas that may need geotechnical data to facilitate design – RPG Geotechnical Design
- Consider identifying wetland boundaries for survey crew to locate when surveying – Environmental Office
- Prepare project-specific portion of eminent domain ad and submit along with PCN & charge code to Environmental Office – Program Manager (PM025)
- Submit first bridge letter for bridge replacement projects (see EDM 36) – Program Manager
- Submit eminent domain advertisement to appropriate media outlets and submit for advertisement –Environmental Office (ENV010)
- Prepare and submit request for accident summary and reports – Program Manager
- Prepare the survey and SUE request, allowing a brief review period for the PDT then submit the survey and SUE request to the Surveys - RPG Roadway Design (RDPD010, SURV010)
- Submit application, fees, and insurance requirements to railroad for approval 60 days prior to conducting surveys or geotechnical borings on railroad right of way – Railroad Projects Office

- Select and contract with Consultant (SUE, Mapping,...), when requested by Project Development Team and provide SUE data, upon completion, to RPG Roadway Design – Survey/Office

[Note: If follow-up survey requests become necessary, for instance, to extend a side road or ditch survey, the request will be prepared and submitted by RPG Roadway Design]

- Once survey data check is complete, submit survey information to RPG Roadway Design and notify the Program Manager (via E-mail) – Surveys Office (SURV020, SURV030, SURV040, SURV130, SURV140, SURV150)
- Coordinate with local public agencies and Landscape Architect, as needed, to determine desired project scope – Program Manager
- Prepare and submit requests for traffic data and analysis to the Director of Traffic Engineering, including pavement loading – RPG Roadway Design (RDPD020)
- Prepare and submit requests for pavement design to Pavement Design Engineer – RPG Roadway Design (RDRW042, RDRW043)

8. Preliminary Design Plans Developed and Conceptual Bridge Plans (if required)

- Plot existing topography and determine plan sheet layout – RPG Roadway Design (RDPD010)
- Develop Design Criteria Report for PM approval – RPG Roadway Design (RDPD027)
- Request Bridge Hydrology Design – RPG Roadway Design (RDPD020, HY010)
- Prepare design (noting in design notebook and copying PM any changes made to minimize impacts to natural resources) – RPG Roadway Design, RPG Bridge Design, RPG Roadway Structural Design (RDPD030)
- For projects requiring alternative geometric designs, Value Engineer to prepare comparative cost estimates – Program Manager
- Place preliminary design onto existing topography and develop preliminary plans – RPG Roadway Design (RDPD010)
- If necessary, distribute the design for review to all members of the Project Development Team to review – Program Manager
- If necessary, distribute to Preconstruction Support (thru PM) for QA review of design criteria, geometric design, pedestrian and bicycle accommodations, landscaping – RPG Roadway Design and/or RPG Bridge or Structural Design
- Perform “Line and Grade” Design Field Review (see IB 2006-7), noting any potential design exceptions – RPG Roadway Design (RDRW060)
- Perform intersection analysis on major intersections on request of Program Manager – Traffic Engineering
- Develop Traffic Management Plan (TMP) for Program Manager to complete and forward to Traffic Engineering – RPG Roadway Design (RDRW0401, RDRW0601)
- Distribute the design and TMP to the Director of Construction Office thru Program Manager for constructability review (see EDM PC-11 dated July 9, 2001) – RPG Roadway Design, RPG Bridge and Structures Design
- Distribute plans and cross sections to RPG Hydraulic Design to initiate drainage design – RPG Roadway Design (RDRW065, HY090)
- Request permit determination from Environmental Office – Program Manager
- Verify receiving streams for project then check if listed on SCDHEC’s most current 303(d) list and table for total maximum daily loads (TMDL) – RPG Hydraulic Design

- Complete floodplain checklist – RPG Hydraulic Design
- Send a copy of the geometric design to MPO/COG and any other local non-SCDOT team members for review and comments, as appropriate – Program Manager
- For road projects programmed on the National Highway System (NHS) with an estimated total cost (including PE, R/W and Construction) in excess of \$25 million, or \$20 million for bridge projects on the NHS, initiate and coordinate value engineering review – Program Manager
- Review and revise if necessary the project schedule – Program Manager

9. Utility and Railroad Preliminary Coordination

- For Railroad involvement, RPG Roadway Design to contact the Railroad Projects Office to review the project and determine what needs to be provided in Preliminary Design Plans submittal to the Railroad Company – RPG Roadway Design
- Conduct Utilities Coordination Meeting, when applicable – Utilities Office and Program Manager
- Determine if environmental permits should include impacts for relocating utilities – Utilities office and Environmental Office

10. Design Review Meeting Conducted, Project Design Finalized

- Analyze written comments received from preliminary design review process – Program Manager with RPG Roadway Design and/or RPG Bridge and Roadway Structural Design
- Schedule/conduct office and, if necessary, field review with the Project Development Team to review comments and team members sign-off on revision/addition to preliminary design then resolve all design issues before finalizing the preliminary design – RPG Roadway Design and/or RPG Bridge Structural Design

[Note: Provide one week minimum advance notice]

- On construction slopes, determine whether to require Fee Simple right of way or Slope Permission- Program Manager

[Note: Obtain input from the Rights of Way staff. See memorandum dated September 12, 2001, from the Director of Preconstruction]

- Identify proposed structures that may require geotechnical investigation and submit to RPG Geotechnical Design to determine areas requiring geotechnical investigations – RPG Bridge Structural Design and RPG Roadway Structural Design and RPG Roadway Design
- With the assistance of Design Manager and RPG Geotechnical Design, Value Engineering to develop a cost estimate for possible retaining walls – RPG Roadway Structural Design and RPG Roadway Design
- Evaluate alternatives to retaining walls, e.g. purchasing additional right of way, changing alignment, etc., to determine most appropriate design – Design Manager
- For roadway projects complete geotechnical checklist to determine if a geotechnical investigation should be performed. – RPG Roadway Design
- Establish proposed boring locations & request Right of Way to obtain drilling access permission - RPG Geotechnical Design
- Request preliminary soil borings from Office of Materials and Research in areas needing geotechnical study including areas identified by the Landscape Architect where landscaping is planned – RPG Geotechnical Design

- Add proposed boring locations as determined by RPG Geotechnical Design to plans – RPG Roadway Design

11. Design Revised, As Necessary

- Update cost estimates to relate to revised geometric design (Optional, if needed) –Value Engineer
- Review and revise, as necessary, the project schedule – Program Controls Unit and PM
- Complete and distribute copies of the final preliminary design to all members of the Project Development Team excluding Program Controls – RPG Roadway Design
- Coordinate review of cost estimate and resolve the differences, if necessary – Program Manager
- RPG Roadway Structural Design Office to create list of facing options for visible structures to be presented at the Public Hearing – Program Manager
- Incorporate changes requested by Railroad after PM's approval and resubmit revised design to Railroad company – RPG Roadway Design and Railroad Projects Office

12. Project Planning Report (PPR) Submitted – Environmental Studies & Document Initiated

- Prepare and submit project planning report to the Environmental Office with a copy circulated through the appropriate offices – Program Manager (PM030)
[Note: PPR's shall be shared with the RPG Bridge Structural Design Office for projects involving a bridge]
- Submit a copy of the project planning report to the State Energy Office and FHWA, as appropriate – Environmental Office
- On all consultant projects involving adding capacity or new location construction where the consultant is responsible for preparing the environmental document, complete the project planning report concerning transportation efficiency and forward it to the Environmental Office for transmittal to the State Energy Office – Program Manager
- Develop EFH impacts for road and bridge projects in tidal areas – Program Manager
- Initiate design exception process identified by road, bridge, and hydraulic design – Program Manager
- Request Traffic Engineering to begin Interchange Modification Report (IMR) or Interchange Justification Report (IJR) and all other traffic studies that may be necessary- Program Manager
- Provide conceptual landscaping information as related to right of way acquisition, as necessary – Landscape Architect
- Request MPO/COG to have the Municipal Agreement signed, as applicable –Program Manager
- Begin preparing environmental document – Environmental Office (ENV020, ENV030, ENV040, ENV050, ENV060, ENVCE010, ENVEA010, ENVEA0101)
- Review project schedule with Project Development Team and determine appropriate estimated completion date for approved environmental document and public hearing displays – Program Manager

13. Environmental Document Submitted for Approval

- Distribute environmental document to the Program Manager and FHWA for review and comment – Environmental Office

[Note: Program Manager may request input from Project Development Team concerning the environmental document]

- Revise Environmental document, as necessary, and submit document for FHWA's approval [Also, notify Program Manager via e-mail that document has been submitted] - Environmental Office (ENVEA0102)

14. Environmental Document Approval Received

- Distribute copy of the approved document to the Program Manager - Environmental Office
- Coordinate and prepare the public hearing booklet if required – Environmental Office and Program Manager
- Determine if visualization techniques are needed. Coordinate with Rights of Way, Environmental, and RPG Roadway Design – Program Manager
- Review information with Environmental Office to be placed on public hearing display and contact RPG Roadway Design Office to prepare display – Program Manager
- Complete the preparation of the public hearing displays – RPG Roadway Design
- Arrange appropriate location/date for public hearing – Program Manager

[Note: Program Manager to coordinate with Environmental Office and Communications & Creative Services to insure that all appropriate SCDOT, FHWA, MPO/COG, elected officials and other personnel are notified of the hearing]

- Request public hearing sign panels and coordinate the installation of the public hearing signs with District staff – Program Manager
- Prepare project-specific portion of public hearing advertisement and submit to Environmental Office – Program Manager
- Complete the preparation of the public hearing advertisement and submit appropriately – Environmental Office
- Review public hearing displays with appropriate staff and FHWA, a minimum of three weeks prior to the public hearing – Program Manager
- Review Public Hearing display with the City or Town Leaders, if located within the municipal limits – Program Manager
- Request execution of Municipal State Highway Project Agreement. Submit executed Agreement to the Rights of Way Office – Program Manager
- Send copies of public hearing plans, environmental document, etc., at least two weeks (15 days) prior to the public hearing, to the District Office and to the local contact person as identified on the public hearing signs – Program Manager
- Send formal notice of the public meeting to all utility companies involved on the project at least two weeks prior to the meeting requesting their attendance – Program Manager

15. Design Public Hearing Completed

- Coordinate/conduct public hearing – Program Manager
[Note: Encouraging MPO/COG staff to actively participate]
- Respond to public hearing comments – Program Manager
- Revise preliminary design plans, as necessary, and distribute to all Project Development Team members – RPG Roadway Design

- Develop right of way plans with final input from the PDT – RPG Roadway Design Request updated cost estimates from value engineer -Program Manager
- Estimate the cost of utility relocation particularly those that have prior rights-Utilities Office
- Estimate cost of any wetland mitigation effort – Environmental Office
- Review and revise, as necessary, the project schedule – Program Controls Unit and PM
- Distribute updated cost estimate to the Project Development Team including the FHWA - Program Manager
- Coordinate the resolution of any substantial changes in the cost estimate and initiate any necessary STIP adjustment – Program Manager
- When retaining walls have been selected as the most appropriate alternative for the site, Notify RPG Roadway Structural Design of required facing to be used (selected from the list of options created during preliminary design) – Program Manager

16. Environmental Permit(s) Submitted

- After hydrology defines outfall and ditch requirements prepare necessary permit application(s), review with program manager, and submit appropriately – Environmental Office (ENV030, ENV060)

[Note: Permit applications should include impacts caused by relocation of utilities]

- Coordinate the resolution of any issues raised by permitting agencies – Environmental Office (ENVP010)

17. Preliminary Right of Way Plans Completed (RDRW025)

- Review and update project schedule with Project Development Team – Program Manager
- Prepare preliminary right of way plans, cross sections, etc., necessary for a Design Field Review (DFR) coordinated with Project Development Team and schedule a DFR – RPG Roadway Design Office

[Note: Program Manager will send plans to MPO and COG team members]

- Provide conceptual signing and traffic signal/ITS information as related to right of way acquisition, as necessary – Traffic Engineering
- Send typical section sheets to Pavement Design Engineer to verify pavement design – RPG Roadway Design
- Contact Utilities Office to review preliminary right of way plans to ensure all needed information is included on plans – RPG Roadway Design
- Verify proposed structures that may require geotechnical investigation and submit to RPG Geotechnical Design to determine areas requiring geotechnical investigations – RPG Bridge Structural Design and RPG Roadway Structural Design and RPG Roadway Design
- Develop Preliminary Bridge Plans- RPG Bridge Structural Design

18. Right of Way Design Field Review

- Coordinate and conduct a Design Field Review (DFR) providing a thorough field review of the preliminary plans by the Project Development Team, to include the District Utility Coordinator, beginning with an office review followed by an on-site inspection – RPG Roadway Design
- Revise plans in accordance with comments from the DFR and provide revised plans, cross sections, etc., to the Project Development Team – RPG Roadway Design
- Provide road plans, including plan and profile, cross-sections, pavement designs, and typical sections to Work Zone Traffic Control Coordinator in Traffic Engineering to begin preparation of work zone traffic control staging plans – RPG Roadway Design
- Provide revised plans including cross sections to RPG Geotechnical Design RPG Roadway Design
- Provide proposed structure design criteria to RPG Geotechnical Design – RPG Bridge Structural Design or RPG Roadway Structure Design
- Notify Signing & Marking Plans Preparation Engineer in Traffic Engineering upon completion of plan and profile sheets to permit scheduling of signing and pavement marking plans preparation – RPG Roadway Design
- Notify Signal Systems Engineer of new signals (identified by District Traffic Engineer or Traffic Engineering Studies) and/or signal replacements –Program Manager
- Traffic Engineering to submit IMR or IJB to Program Manager – Traffic Engineering
- Submit Final Interchange Modification/Justification Report to FHWA – Program Manager
- Meet with Utility Companies to begin early coordination – District Office
- Review and revise, as necessary, the project schedule – Program Manager

19. Geotechnical Investigations & Reports

- Coordinate with Environmental Office to determine if site is historically significant or if there is soil, surface water, or subsurface water contamination – RPG Geotechnical Design
- Request subsurface investigations for proposed structures – RPG Geotechnical Design
- Provide structure plan and profile and structure loading to RPG Geotechnical Design – RPG Bridge Structural Design or RPG Roadway Structure Design
- Provide final geotechnical report including final structure recommendations to RPG Structural Design – RPG Geotechnical Design
- Provide final geotechnical report including all relevant hydraulic parameters to RPG Hydraulic Design – RPG Geotechnical Design

20. Structures Designed

- RPG Hydraulic Design to provide hydraulic requirements for bridge/culverts to RPG Bridge or Roadways Structure Design – RPG Hydraulic Design
- Establish retaining wall and culvert structure alignment and stationing, provide to RPG Roadway Design Group a sketch showing additional right of way needed due to structure footprint or construction requirements – RPG Roadway Structural Design
- Design structure for construction plans based on information provided in the final geotechnical report – RPG Roadway Structural Design

- Prepare plan, profile, and cross section drawings to be included in the construction plans - RPG Bridge and Roadway Structural Design

21. FONSI Submitted for Approval

- Review with the Program Manager any project changes that may have occurred since document approval, prepare the FONSI request, prepare public hearing certification package and allow Program Manager to review– Environmental Office
- Submit public hearing certification package to FHWA – Environmental Office

[Note: Program Manager may share the FONSI request with the Project Development Team for comments]

22. FONSI Approval Received

- Provide copy of approved FONSI to Program Manager – Environmental Office
- If necessary, coordinate with Environmental Office and prepare project-specific portion of advertisement that the FONSI is approved– Program Manager
[Note: If the project involves a Categorical Exclusion and a public hearing is held, the Program Manager will coordinate with the Environmental Office and insure that the appropriate Study Report and advertisement is prepared and submitted]
- Complete the preparation of the advertisement and submit appropriately – Environmental Office

23. Preliminary Right of Way Plans Field Review (see IB 2006-6)

- Examine the preliminary right of way plans with emphasis on the roadway drainage and the impact of the project to the adjacent properties. This review will also identify how new and existing right of way and roadway designs will impact construction – RPG Roadway Design
- Complete the drainage design and review with the Project Development Team – RPG Hydraulic Design
- Complete and submit work zone traffic control staging plans – Traffic Engineering
- Coordinate with the Construction Office and establish the Constructability Review Team and date of their review – Program Manager (Reference: SCDOT Construction Manual – Section 101.3.1 (Constructability Review))
- Perform constructability review (See EDM PC-11 July 2001) – Constructability Review Team

24. Right of Way Plans Completed & Signed

- Review project schedule with Project Development Team and update as necessary - Program Manager
- Verify execution of Municipal State Highway Project Agreement, if required. If Agreement has not been executed, re-submit for execution by the City or Town. - Program Manager
- Provide completed right of way plans to the Landscape Architect to receive recommended landscaping – RPG Roadway Design

- Review and prepare Design Exceptions and forward through Program Manager to the Director of Preconstruction for approval – RPG Roadway Design, RPG Hydraulic Design, RPG Structures Design
- Notify Value Engineer[through Program Manager] to initiate updated cost estimates include updated cost on utility and wetland mitigation – Program Manager
- Review and revise, as necessary, the project schedule – Program Controls Unit
- Prepare updated cost estimates, utilizing input from R/W, utilities, traffic engineering, environmental, etc. as appropriate – Value Engineer
- Include right of way requirements around new or modified structures as provided by RPG Roadway Structural Design, Traffic Engineering (signals, signs, and ITS), OfficeRPG Roadway Design
- Coordinate the resolution of any substantial changes in estimated costs and share the information appropriately – Program Manager
- Complete Quality Control review of right of way plans. Obtain necessary initials and submit to Roadway Design Support for quality assurance review. – RPG Roadway Design
- Complete QA Review of right-of-way plans and return comments to RPG Engineer – Roadway Design Support
- Complete the right of way plans, including resolution of review comments and routing for final signatures.
- Submit the signed r/w plans to Preconstruction Support to forward to Rights of Way Office and FHWA, as requested; notifying the Program Manager – RPG Roadway Design (RDRW140)
- Provide completed right of way plans to the Utilities Office and District Office to initiate final utility coordination and also final railroad coordination, as necessary – RPG Roadway Design (UT020, RDRW150)
- Provide signed right of way plans to Traffic Engineering to begin finalizing pavement marking, signing, signal, and traffic control plans. – RPG Roadway Design

25. Right of Way Funding Obligated & Acquisition Process Initiated

- Submit r/w cost estimate via email to PM for concurrence of amount prior to submitting to preconstruction resource management – Right of Way Office
- Submit right of way cost estimate to Preconstruction Resource Management– Rights of Way Office
- Coordinate the obligation of right of way funds and notify the Program Manager and Director of R/W immediately upon approval of funds – Preconstruction Management (PCM020, PCM030)
- Initiate R/W acquisition process – Right of Way Section

26. Utility and Railroad Coordination

- Begin coordination necessary to secure Utility Agreements and No-cost relocation sketches – District Office (UT010, UT030-UT440)
- Send right of way plans to the railroad with a detailed letter explaining the project as it affects the Railroad to initiate their preliminary engineering review for approval– Railroad Projects Office (UTRR010, UTRR020, UTRR030, UTRR090, UTRR100, UTRR110)

27. Project Assessment

[Note: Project Development Team meets to ensure project commitments are being met. FHWA, MPO/COG representatives, and utility companies discuss with Project Development Team any project specific requirements that need to be included in the contract documents – Program Manager

- All project requirements as a result of field reviews, design exceptions, constructability reviews, and maintenance of traffic concerns are addressed – Program Manager
- Right of way special provisions, as a result of negotiations, provided to RPG Roadway Design and to Letting Preparation to be reflected in the plans or contract special provisions – Rights of Way Office
- All relocations will be completed prior to award, or the appropriate special provisions are provide to Road Design to be included in the contract special provisions as concurred by the FHWA – Right of Way Section
- Utility relocations, special requirements, funding, and other items as needed are in place and included in the contract as appropriate – Program Manager
- Local municipality needs are identified and included in the special provisions where appropriate. This could vary from lane closure restrictions for special events, to landscaping coordination, to coordination of preferred detour routing and signing – Program Manager
- Environmental commitments and constraints are provided to Program Manager and Design Manager in order to be clearly indicated in the proposal and/or plans – Environmental Office
- Cash flow requirements are discussed with the Finance Office and the overall status of the Program area will allow the project to proceed to completion – Program Manager

28. Construction Plans Review (optional) PS&E Review (see IB 2006-9))

- Provide construction plans to the construction field office for review by the Resident Engineer – RPG Roadway Design
- Provide bridge construction plans to the Bridge Construction Office for review – RPG Bridge Structures Design
- Examine the construction plans for completeness with emphasis on the estimated quantities. District may add or revise quantities as deemed necessary to construct the project. Make changes to quantities on the summary of estimated quantities sheet sent by RPG Road and Bridge Design. A field review may be held but is not required - District/Resident Engineer
- If a pavement design is older than 3 years determine need for a Pavement Design Review. Resubmit forms for traffic information and pavement design, as needed – RPG Roadway Design

29. Finalize Utility Coordination/Relocation

- All Utility Agreements and No-cost relocation sketches received from the District are reviewed, approved, and utilities are authorized to begin work 2 months prior to letting – Utilities Office (UT450)
- Engineer of Record begins writing and researching special provisions and/or supplemental specifications as indicated by Design Group – Design Manager

- Verify PCN & charge code established for utility relocations 3 months prior to letting – Program Manager

30. Construction Plans Completed & Signed

- Request right of way revisions to plans subject to approval by Program Manager – Rights of Way Office
- Finalize box culverts, retaining wall and shoring designs; provide details to RPG Roadway Design for plans – RPG Roadway Structural Design
- Provide pavement marking, signing, traffic signal/ITS plans, special provisions and updated staging plans as necessary to RPG Roadway Design –Traffic Engineering
- Provide to RPG Roadway Design any required special provisions or estimates – Landscape Architect.
- Complete road construction plans including structure plan, profile, and cross section sheets as provided by RPG Roadway Structural Design – RPG Roadway Design – RPG Roadway Design
- Input quantities into PES- RPG Roadway Design and RPG Bridge Structures Design
- Complete bridge construction plans, complete special provisions and estimates –RPG Bridge Structural Design
- Complete Quality Control review of Construction Plans. Obtain necessary initials and submit to Roadway Design Support and/or Structural Design Support for quality assurance review. – RPG Roadway Design and/or RPG Bridge Structure Design
- Complete QA Review of Construction Plans and return comments to RPG Engineer – Roadway Design Support and/or Structural Design Support
- Complete the Construction Plans, including resolution of review comments and routing for necessary signatures – RPG Roadway Design
- Complete NOI/SWPP package and submit to engineer of record for signature – RPG Hydraulic Design

31. Contract Proposal Preparation

- Complete Special Provisions and submit to Letting Preparation Engineer – Engineer of Record
- Complete engineers' estimate in PES for use by Program Manager, Contracts Administration and Preconstruction Resource Management – Letting Preparation
- Complete cost estimate updates including review of PE and R/W expenditures and remaining budgets – Program Manager
- Complete special provisions and prepare proposal for printing – Letting Preparation
- Provide opportunity for PM and DM to review final proposal – Letting Preparation
- Coordinate the resolution of any substantial changes in the estimated costs and share the information appropriately – Program Manager
- On large projects, prepare a CPM schedule to establish reasonable construction schedule - Construction Office
- Conclude participation agreement with governmental entities concerning maintenance of landscaping – Program Manager
- Evaluate project for a minimum required contractor performance score- Director of Construction

- Submit NOI package (NPDES) to Director of Construction Office – Design Manager

32. PS&E Submittal

- Upon receipt of approved permits, notify Program Manager – Environmental Office
- Distribute copies of approved permits as necessary – Environmental Office
- Notify FHWA of permit approval dates or problems encountered – Environmental Office
- Right of Way acquisition process completed, with all tracts either acquired or condemned – Rights of Way Office
[FHWA needs Right of Way certificate on all Interstate projects and projects greater than \$50 million on the National Highway System] and other projects by request of FHWA (See FHWA Oversight Agreement)
- Right of Way Certification provided to FHWA, PM, Letting Preparation and Director of Construction Office – Right of Way Office
- Submit PS&E package to FHWA, as appropriate – Letting Preparation Engineer
- Coordinate Obligation of funds. Receive and distribute FHWA Project Authorization Approval – Preconstruction Resource Management (PCM040, PCM050)
- Distribute Utility Agreements and/or relocation sketches – Utilities Office
- Prepare and publish ad for highway letting for project – Contracts Administration
- Conduct Pre-Bid Meetings on large and multi-phased projects, address utility conflict issues and if necessary prepare addenda to disseminate the minutes and Q&A from the Pre-Bid meeting – Director of Construction Office

33. Construction Bids Received

- As soon as possible after bid opening, submit bid information to appropriate Program Manager – Contracts Administration (PCM060)
- Coordinate the resolution of any substantial differences between bid and STIP amounts – Program Manager
- Coordinate contract award with the FHWA on all oversight projects, provide necessary bid information – Contracts Administration
- As soon after bid opening as possible, load bid information into TrnsPort Program in order to analyze the bid and to expand the bid history – Contracts Administration
- Invite PM to Bid Review Committee Meeting to review bids for award/reject recommendation – Director of Construction Office

34. Award Project – Monitor Project Expenditures & Report Periodically to MPO, COG

- Notify Program Manager via email upon approval of award – Contracts Administration
- Schedule/conduct preconstruction conference – Resident Construction Engineer
- Provide information periodically to Program Manager on status of construction and construction expenditures, upon request – Construction Office
- Provide information periodically to Program Manager on status of condemnation cases, R/W hold offs, and remaining anticipated R/W expenditures, upon request – Rights of Way Office
- Distribute Railroad Agreements to the appropriate railroad company – Rights of Way Office (UTRR040, UTRR050, UTRR060, UTRR070, UTRR080, UTRR120, UTRR130, UTRR140, UTRR150)
- Verify invoices for utility relocations are paid. Notify PM – Utilities Office (UT460)

DRAFT

Overhauled January 2010

DATES FOR ASSEMBLING INFORMATION ON CONSTRUCTION OBLIGATIONS FOR FEDERAL FISCAL YEAR 2010 BEGINNING WITH OCTOBER 2009

6/12/2009												
OBLIGATION MONTH	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT
\$ If project has full FHWA oversight, submit Complete Plans ¹ to Preconstruction Support for QA review.	17-Jul	17-Aug	22-Sep	19-Oct	13-Nov	18-Dec	15-Jan	12-Feb	10-Mar	10-Apr	21-May	21-Jun
\$ If project has full FHWA oversight, submit Complete Plans ¹ to the Preconstruction Support Operations Center to prepare PS&E	14-Aug	14-Sep	20-Oct	16-Nov	11-Dec	15-Jan	12-Feb	15-Mar	16-Apr	17-May	21-Jun	19-Jul
* For all other projects, submit Complete Plans ¹ to Preconstruction Support for QA review.	24-Aug	21-Sep	20-Oct	23-Nov	18-Dec	15-Jan	22-Feb	22-Mar	16-Apr	21-May	21-Jun	26-Jul
\$ Letting Preparation Engineer submits PS&E to FHWA for full oversight projects.	4-Sep	5-Oct	10-Nov	7-Dec	1-Jan	8-Feb	8-Mar	5-Apr	7-May	7-Jun	12-Jul	9-Aug
* All Letting Plans ² checked, signed and submitted to the Operation's Center.	21-Sep	19-Oct	24-Nov	21-Dec	15-Jan	22-Feb	22-Mar	19-Apr	21-May	21-Jun	26-Jul	23-Aug
* Primary Meeting to review project Obligation Schedules.	22-Sep	20-Oct	25-Nov	22-Dec	19-Jan	23-Feb	23-Mar	20-Apr	25-May	22-Jun	27-Jul	24-Aug
Letting List completed and distributed to staff.	24-Sep	22-Oct	25-Nov	23-Dec	21-Jan	25-Feb	25-Mar	22-Apr	27-May	24-Jun	29-Jul	26-Aug
\$ Engineer's Estimate complete. Staff to submit Right of Way & Utility Certificates, etc. to Obligation Management Office for FHWA authorization process.	16-Oct	20-Nov	18-Dec	15-Jan	19-Feb	19-Mar	16-Apr	21-May	18-Jun	23-Jul	20-Aug	17-Sep
\$ FHWA to authorize projects.	23-Oct	27-Nov	28-Dec	22-Jan	26-Feb	26-Mar	23-Apr	28-May	25-Jun	30-Jul	27-Aug	24-Sep
* Letting Review Meeting.	26-Oct	30-Nov	29-Dec	25-Jan	1-Mar	29-Mar	26-Apr	31-May	28-Jun	2-Aug	30-Aug	27-Sep
All Ad Information completed for Contracts Administration Office.	28-Oct	2-Dec	30-Dec	27-Jan	3-Mar	31-Mar	28-Apr	2-Jun	30-Jun	4-Aug	1-Sep	29-Sep
Plans to Engineering Reproduction Services.	29-Oct	3-Dec	31-Dec	28-Jan	4-Mar	1-Apr	29-Apr	3-Jun	1-Jul	5-Aug	2-Sep	30-Sep
* Advertisement printed in newspaper and posted on SCOT website.	2-Nov	7-Dec	4-Jan	1-Feb	8-Mar	5-Apr	3-May	7-Jun	5-Jul	9-Aug	6-Sep	4-Oct
Proposals to Engineering Reproduction Services.	5-Nov	10-Dec	7-Jan	4-Feb	11-Mar	8-Apr	6-May	10-Jun	8-Jul	12-Aug	9-Sep	7-Oct
* Plans and Proposals available to Contractors.	10-Nov	15-Dec	12-Jan	9-Feb	16-Mar	13-Apr	11-May	15-Jun	13-Jul	17-Aug	14-Sep	12-Oct
Deadline for addenda to bid packages.	2-Dec	8-Jan	3-Feb	3-Mar	7-Apr	5-May	2-Jun	7-Jul	4-Aug	8-Sep	6-Oct	3-Nov
Date of Letting.	8-Dec	12-Jan	9-Feb	9-Mar	13-Apr	11-May	8-Jun	13-Jul	10-Aug	14-Sep	12-Oct	9-Nov

¹ Complete Plans contain all applicable initials from Department production staff (design leads, Design Manager, and Program Manager). Complete Plans are not required to be signed and sealed by the Engineer of Record unless deemed necessary as part of a contractual agreement governing the development of the plans.

² Letting Plans have completed all required quality assurance reviews and contain all applicable initials from Department production and support staff. Letting Plans are required to be signed and sealed by the Engineer of Record.

*SIGNIFICANT MILESTONES
\$ FHWA Requirement